ANNUAL REPORT

1925

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Borough of Manhattan

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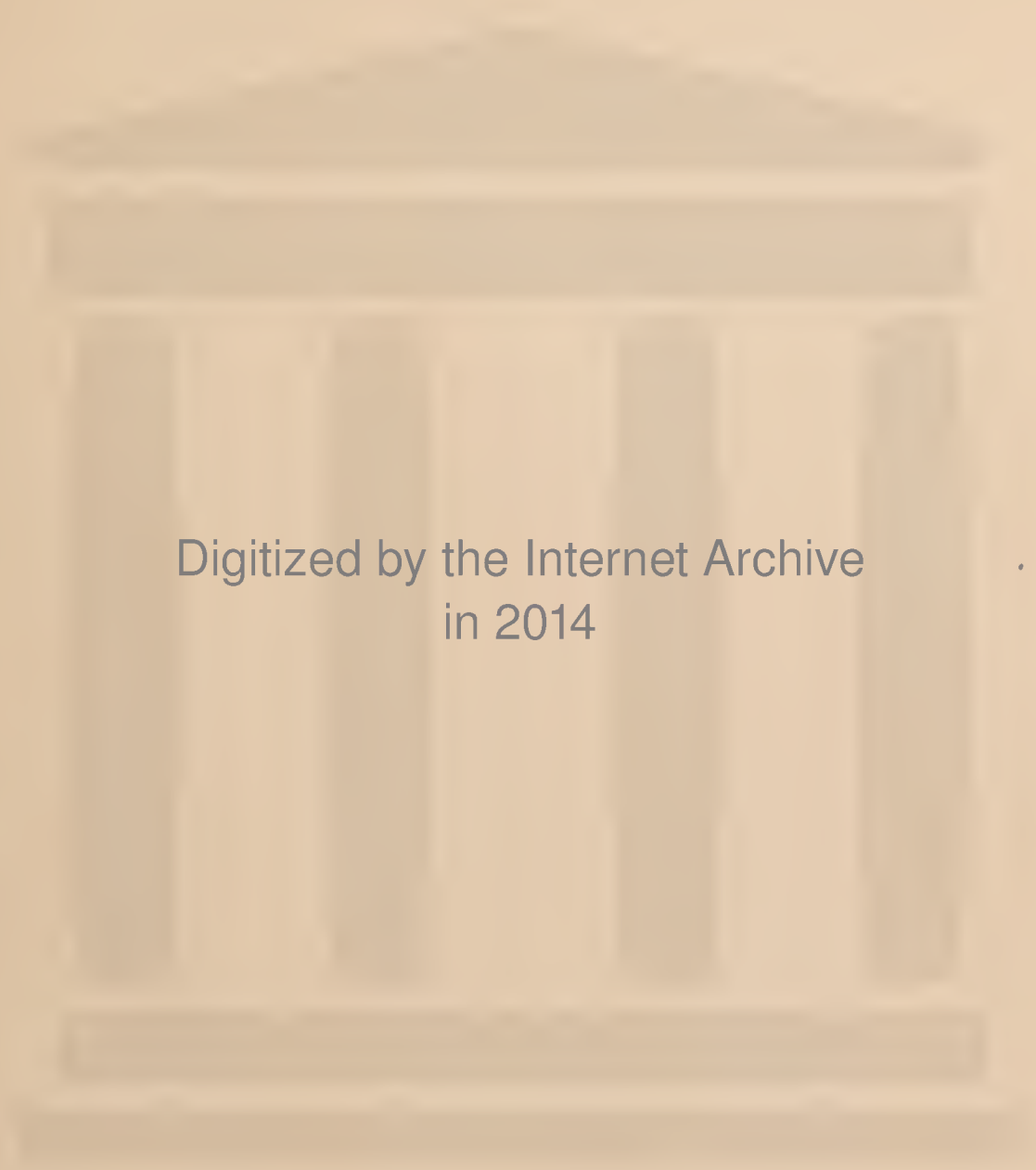

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RECENT AERIAL VIEW OF MANHATTAN

REPORT

of the

Business and Transactions

of the

President of the Borough of Manhattan

CITY OF NEW YORK

JULIUS MILLER, President

For the Year Ending December 31, 1925

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William Bratter, Inc.
2 Duane Street, New York

TABLE OF CONTENTS

CONSULTING ENGINEER'S REPORT

Titles	Pages
Activities of Local Boards	4
Bus Routes	3
Depew Place Improvement	2
Elev. Express Highway along Hudson River	1
Hudson River Bridge at 57th St	1
Pavements (Permanent) Construction of	4
Pavement (Temporary) Construction of	4
Regulating and Grading	4
Retaining Wall, Construction of	4
Sewage Disposal	3
Sewers, Construction of	4
Subway Entrances	3
Terminal Market	2
Traffic Studies	2

DIVISION OF AUDIT AND ACCOUNTS

Contracts Entered Into	5
Contracts Completed	5
Costs and Refunds	6
Statement of Receipts	6

BUREAU OF ENGINEERING

Central Park West	11
Chemical and Physical Testing Laboratory	34
Depew Place and Park Ave. Improvement	8
Division of Construction	24
Division of Design	15
Division of Encroachments & Incumbrances	60
Division of Inspection	31
Division of Maintenance	25
Expenditures 1925	7
Express Highway, from Canal St. to W. 72nd St.	9
Express Highway, from 72nd St. to 129th St.	9
59th Street (East) Widening	9
Improvements completed	8
Index of Data Sheets of Highways & Sewers	35
Riverside Drive Extension to and Across Harlem River	9
Riverside Drive (New) and Shelter-House at Inspiration Point	14
Second Avenue Depression	8
Sewer (Relief) for 106th and 110th Sts. Sewer Siphons	11
St. Nicholas Ave., 110th to 169th Sts	11
Traffic (Facilitating Interborough and Crosstown)	11

BUREAU OF PUBLIC BUILDINGS AND OFFICES

	Pages
City Leased Public Offices	64
City Owned Court Houses	63
City Owned Floating Baths	64
City Owned Plants and Yards	65
City Owned Public Baths	64
City Owned Public Buildings	66
City Owned Public Comfort Stations	65
Patronage Tables	72
Scope of Work	63
Welfare	65

INTRODUCTION

February 19, 1926.

Hon. James J. Walker,
Mayor.

Dear Sir:

Herewith I submit the Annual Report of the President of the Borough of Manhattan for 1925:

TRAFFIC RELIEF

In further carrying out my comprehensive plan for the relief of traffic congestion, the following improvements were completed:

Riverside Drive Improvement, from 165th Street to Dyckman Street.

Fifth Avenue Roadway Widening, from 8th to 13th Street and from 59th to 60th Street.

Park Avenue—Street and Roadway Widening, east side, from 32nd to 33rd Street.

Second Avenue Roadway Widening, from 57th to 61st Street.

Lexington Avenue Roadway Widening, from 53rd to 62nd Street.

West End Avenue Roadway Widening, from 69th to 72nd Street.

Sixth Avenue Extension, from Carmine Street to Laight Street—Property acquired from Carmine Street to Broome Street and from Watts Street to Laight Street.

Inwood Hill Park Addition—Land acquired.

Highbridge Park Addition—Land acquired.

Fort Washington Addition—Land acquired.

INITIATION OF NEW IMPROVEMENTS

Among the new projects for which studies have been made and, in some cases, plans prepared, I may mention the following:

Depew Place Improvement, East Side Grand Central Terminal and Park Avenue, 46th to 57th Street, Roadway Widenings.

Depressing Second Avenue at the Queensborough Bridge.

Widening 59th Street, from Second to Fifth Avenue.

Express Highway along Hudson River, from Canal to 72nd Street.

Express Highway through Riverside Park, from 72nd to 129th Street.

Extension of Riverside Drive to and across the Harlem River.

Central Park West Improvement, from 59th to 110th Street.

St. Nicholas Avenue Roadway Widening, from 110th to 169th Street.

Park Avenue Roadway Widening, from 57th to 96th Street.

Relief Sewer for 106th and 110th Street siphon outlets into the Harlem River.

Elimination of New York Central Railroad West Side grade crossings, from 125th to 135th Street.

Regulating and Grading Laurel Hill Terrace, from 184th Street to Amsterdam Avenue.

Interborough Traffic Tunnel, between Queens and Manhattan.

New Court House Site Street System.

Sewer in Avenue C, between 4th and 14thStreet.

Submerged Outlet for Sewer at 23rd Street and East River.

Reconstructing Sewer Outlet at 23rd Street and Hudson River.

Riverside Drive West—Viaduct and grading 155th to 165th Street.

DEPEW PLACE AND PARK AVENUE IMPROVEMENT

On the last day of the year the Comptroller signed the agreement between the City and the New York Central Railroad Company for this important improvement, the construction of which can now proceed. This improvement consists of a 27′ roadway on each side of the Grand Central Station, connecting with the Viaduct over 42nd Street on the south, crossing over 45th Street on the north above the grade of that street, passing through a proposed building to be erected by the railroad company extending from Vanderbilt Avenue to Depew Place and meeting the grade of Park Avenue at 46th Street. This improvement will give a capacity of 3 lines of vehicular traffic in each direction, free of cross traffic interference, from 40th Street to 46th Street, through the most congested section of the City. In conjunction with the widening of the roadways over the railroad structure in Park Avenue, from 46th to 57th Street, this improvement will afford a measure of traffic relief the full significance of which cannot be fully appreciated until the work is actually completed.

SECOND AVENUE DEPRESSION

The Manhattan end of the Queensborough Bridge at Second Avenue, between 59th and 60th Streets, is one of the most congested points in the Borough, and the congestion is increasing steadily. The remedy is to separate the bridge and avenue traffic by depressing part of the roadway of Second Avenue into a tunnel, beginning at the north line of 57th Street and extending to the south line of 62nd Street. This will allow Second Avenue traffic to pass under that coming over the bridge.

WIDENING EAST FIFTY-NINTH STREET

To give the depression of Second Avenue at Queensborough Bridge maximum effectiveness, it is proposed to widen 59th Street from 60 to 110 feet by taking 25 feet from the property on each side. This improvement can be made at less cost now in view of the demolition of the old Savoy Hotel and the reconstruction of the Great Northern Hotel, and new buildings for these sites can be planned to fit the position of the Street as widened.

EXPRESS HIGHWAY FROM CANAL TO 129TH STREET

The necessity for an elevated roadway for rapidly moving vehicular traffic is urgent. A plan has been prepared for such a structure on the wide river-front street along the Hudson River. The plan will be submitted to the Board of Estimate early next year.

North of 72nd Street it is proposed to build an express highway over the New York Central tracks and extend Riverside Park outshore therefrom. This wide express thoroughfare will connect with the one south of 72nd Street, making a continuous express highway from the lower part of the City to the City Line.

RIVERSIDE DRIVE EXTENSION TO AND ACROSS THE HARLEM RIVER

The present Broadway bridge over the Harlem River is the only connecting link on the west side of the Borough with the Bronx and Westchester Counties. All the traffic from Riverside Drive and Broadway must use it. The enormous increase in traffic demands another bridge, and it is proposed to build one over the Harlem River and valley which will carry the New York Central Railroad as well as the Driveway.

CENTRAL PARK WEST

Bordered on the east by Central Park, this 100 foot avenue, with two car tracks close to the east curb, provides only 3 lanes for vehicular traffic which are altogether inadequate. To afford necessary additional roadway space, it is proposed to reduce the width of the sidewalks

to 15 feet on the west and to 16 feet on the east side, thus increasing the width of the roadway to 69 feet. It is further proposed either to move the trolley tracks to the centre of the roadway or remove them all together and reroute the line through another avenue if a satisfactory arrangement can be made. The excavation for the new subway makes this a good time to carry out the improvement.

ST. NICHOLAS AVENUE, FROM 110TH TO 169TH STREET

The traffic importance of this avenue is enhanced by the fact that it is one of the few uptown diagonal thoroughfares. Like Central Park West, it is being excavated for the subway from 122nd to 168th Street, so that this is an opportune time to widen the roadway by taking strips from the sidewalks.

INTERBOROUGH AND CROSSTOWN TRAFFIC

A traffic count on May 28, 1924, showed that about 67,000 vehicles used the bridges and ferries across the East River, between Grand Street and 92nd Street, during the 12 hours between 7 A. M. and 7 P. M. About 1,600 of these vehicles came over the ferries and the remaining 65,400 were about equally divided between the Manhattan and Queensborough Bridges. Practically all of this traffic moved east or west for longer or shorter distances, and then moved along north and south avenues to its destination. The congestion caused by the enormous traffic passing over each of these bridges can only be relieved by the construction of an additional bridge or a tunnel. Based upon an exhaustive study of existing and future traffic conditions, it is proposed to construct a tunnel from some point in the Borough of Queens under the East River and thence across the Borough of Manhattan. This tunnel will be accessible to and from the north and south avenues without any traffic crossings, so that a continuous moving stream of vehicles will furnish far greater facilities than a structure above ground. It has the further advantage that at both ends and all along its line, feeders can be provided with but a minimum disturbance of present conditions.

HOW TO FURTHER REDUCE CONGESTION

To find a temporary remedy for present traffic conditions by tunnel or bridge is not sufficient. Action must be taken to permanently reduce congestion at critical points. The erection of large manufacturing buildings in the thirty's where the narrow streets do not provide sufficient traffic accommodation is a problem that requires scientific handling by experts in city planning. A minimum requirement should be that space for parking and for the loading and unloading of business vehicles should be provided on private property in a manner that will not encumber the street or affect its vehicular or pedestrian traffic.

RELIEF SEWER FOR 106TH AND 110TH STREET SEWER SIPHONS

An area of some 400 acres, bounded by 90th Street and 125th Street, the Harlem River and 8th Avenue, is drained by two large sewer siphons which pass under the subway at 106th and 110th Street at a depth of about 16 feet below high-water. In case of stoppage of the siphons, a large area would be flooded owing to the absence of a relief sewer. It has, therefore, been determined to prepare plans for a relief sewer in 111th Street, through which any serious surcharge of the present sewers could be drained into the Harlem River without causing damage.

ALLEN STREET WIDENING

The preparation of the final map for this improvement was completed and consideration of it is pending in the Board of Estimate.

The plan provides for widening the street approximately 87 feet, between West Houston

Street and Division Street. To provide an outlet for traffic into East Broadway, Pike Street will be widened, between East Broadway and Division Street.

WIDENING FOURTH AVENUE, FROM 12TH TO 14TH STREET

Being the connecting link between Lafayette Street on the south and Park Avenue on the north, Fourth Avenue is a heavy traffic street. It is 100 feet wide south of 12th Street and north of 14th Street, but between these streets, it is much narrower, causing serious traffic congestion in this section, which it is proposed to widen to 100 feet. Plans and estimates have been prepared for this improvement.

RIVERSIDE DRIVE IMPROVEMENT

This improvement extends from 165th Street to Dyckman Street and was completed and officially opened on May 30, 1925. The width of the roadway was increased from 30 to 60 feet, forming a fine boulevard, beautified by the planting of 400 Norway Maple trees, the laying of 10,000 square yards of sodding and the seeding of about 30,000 square yards of filled-in area.

LAUREL HILL TERRACE SEWER

The construction of this sewer, from 179th to 184th Street, has made possible the improvement of the large area of adjacent property which could not be improved for lack of drainage facilities.

CHITTENDEN AVENUE

The regulating and grading of this Avenue required the construction of a retaining wall on the westerly side about 40 feet high. On the top of this retaining wall is a masonry parapet about 4 feet above the street grade. This improvement was completed and trees planted 50 feet apart along both sidewalks, enhancing the beauty of the improvement and affording a fine view of the Hudson River.

WADSWORTH TERRACE

This Avenue was regulated and graded and drains constructed from 188th to 190th Street. This improvement included the building of retaining walls on the southerly side of 188th Street, from Wadsworth Avenue to Wadsworth Terrace, and on the westerly side of Wadsworth Terrace, from 188th to 189th Street. The sewer rests on the shoulder of the retaining wall which insures it against settlement in the filled-in area.

SEAMAN AVENUE AND CUMMING STREET

Seaman Avenue, between Dyckman Street and Academy Street, and Cumming Street, between Seaman Avenue and Broadway, were regulated and graded and sewers constructed therein. This improvement was followed by large building operations on the adjacent property.

MAINTENANCE OF HIGHWAYS

Three asphalt gangs were added to our repair force. Repairs were made to 610,836 square yards of asphalt pavement, 285,079 square yards of granite block pavement and 1,054 square yards of wood block pavement. This yardage exceeds the area repaired in the preceding year by about 100,000 square yards. About 200,000 square yards of asphalt pavement was resurfaced by the use of surface heaters. The repouring of joints in the granite pavement was undertaken on a much larger scale than formerly. This process adds to the life of the granite blocks by cushioning the blows of wheels on the corners of the blocks. It also tends to prevent jarring and adds to the comfort and smoothness of vehicular traffic.

MAINTENANCE OF SEWERS

There have been some serious breaks in sewers during the year. Some of these breaks were caused by excavations for buildings or duct lines alongside the sewers, and were repaired as rapidly as possible. The work of enlarging the manholes in the granite heads of catch basins to permit the use of basin cleaning machines was continued so that now nearly all the sewer basins north of 72nd Street can be cleaned by machines operating a grab bucket of the orange peel type. Extensive repairs had to be made to barrel sewers under piers due to the supports having rotted away.

SEWAGE DISPOSAL

This matter is engaging the attention of my engineers and those of other boroughs. Conferences have been held with a view to united action for final disposal of sewage, or its treatment, or both. It having been determined that part of Wards Island is suitable for a sewage disposal plant, a bill was introduced in the legislature last year to acquire a site on that Island, but failed of passage because of differences of opinion between state and city authorities. These differences have now been adjusted and I am hopeful that when the bill is reintroduced it will be passed, so that we can begin preparations for the construction of such a plant.

MANHATTAN MUNICIPAL TERMINAL MARKET

Additional studies were made for a wholesale market for foodstuffs. A site at Gansevort and West Streets was selected and recommended for adoption, and an ordinance is now pending to make this recommendation effective. Some 300 car loads of perishable fruits can be handled at this site. Construction plans are being prepared by the Department of Markets.

SUBWAY ENTRANCES

The practice of locating subway entrances and kiosks in sidewalk areas impedes travel, creates dangerous conditions by obstructing the view of pedestrians and drivers, and involves tedious negotiations and greatly increased cost of street widening operations. For these reasons efforts are being made to remove the kiosks and to have subway entrances constructed within the lines of private property.

EXCELSIOR BUILDING

This building has been vacated and is being altered as offices for the District Attorney, his staff and library. The building has also been connected with the Criminal Court Building by a bridge across White Street.

CARMINE STREET BATH

A new wing was added to this bath on the easterly side and new showers were installed, increasing the capacity of the bath considerably. Proceedings were initiated to install a swimming pool at the west side in the adjoining park, and an appropriation of $85,000 was made for this purpose. Plans have been prepared for this addition which has the endorsement of neighborhood associations and others.

SHOWER BATH, 247 MADISON STREET

This building was formally opened April 1st. The ceremony was participated in by residents of the neighborhood and a large number of children. Group bathing has been arranged for by locating the showers along three walls of each bathing space without partitions between them. Each shower is controlled by separate hot and cold water valves turned on and off by bathers.

SHOWER BATH, 35 WEST 134TH STREET

This new bath was formally opened to the public June 1. It is furnished with gymnasium equipment and is a most complete building in every respect.

JEANETTE PARK COMFORT STATION

This comfort station was completed early in the year. It is situated on Front Street, facing the open space at the east side of Jeanette Park, located at Coenties Slip and South Street, in the centre of a large floating population of seamen and others. The necessity for this comfort station is shown by its large patronage.

McNALLY PLAZA COMFORT STATION

The erection of this comfort station at Amsterdam Avenue and 181st Street is proceeding at a cost of $36,000.

PATRONAGE OF FREE PUBLIC BATHS

The patronage of the interior baths was 10,145,537 and of the floating baths 1,154,181, making the total patronage of our bathing system 11,299,718.

BUILDINGS

The volume of new buildings in 1925 broke all records of preceding years. Plans were filed for 940 new buildings at an estimated cost of $370,776,504, which is an increase of $112,014,919 over the amount for 1924. This enormous outlay for new construction represents an average expenditure of $1,348,278 per working day.

Applications were filed for alterations to 3,126 buildings at an estimated cost of $28,-154,900, which equals an expenditure of $102,381 per working day.

There has been a large and rapid increase in the number of hotels or non-housekeeping apartment buildings. The valuation of residential buildings is approximately three times that of the preceding year.

The valuation of new tenements represents an increase of approximately 12%, and business of all classes show an increase in valuation of about 35%.

This year, as in other years, the number of buildings demolished exceeds the number erected which was 557, whereas the number demolished was 1,493.

Not only was there a large increase in the number and value of new buildings, but there has been a great increase in the number of those of more than ordinary height. During 1925 139 applications were filed for buildings more than 12 stories high, exclusive of tenement houses, while only 50 were filed for buildings of this class in 1924. The heights vary from 13 to 42 stories.

It is noteworthy that 35 separate buildings had to be demolished to make room for the Telephone Building which occupies the entire block bounded by West, Vesey, Washington and Barclay Streets.

Full information regarding the work done by Bureaus and Divisions will be found in the documents appended hereto.

Very truly yours,

JULIUS MILLER,

President, Borough of Manhattan

PERSONNEL

Julius Miller	President of the Borough.
Samuel Weintraub	Assistant to the President.
Eugene F. McLaughlin	Secretary of the Borough.
Charles Delaney	Secretary to the President.
Louis Wolff	Confidential Examiner.
Dennis C. Doris	Confidential Inspector.
Miss Mary G. Jensen	Confidential Stenographer.
Joseph Johnson	Commissioner of Public Works.
James J. Hagan	Assistant Commissioner of Public Works.
Frank L. Prendergast	Secretary to the Commissioner.
John J. Meade	Secretary to the Department.
John F. Sullivan	Consulting Engineer.
C. M. Pinckney	Chief Engineer, Bureau of Engineering.
H. W. Levy	Principal Assistant Engineer.
Robert A. MacGregor	Assistant Engineer, in charge of Division of Maintenance.
Joseph Collyer	Assistant Engineer, in charge of Division of Design.
Ralph Lewis	Assistant Engineer, in charge of Division of Construction.
Joseph Frank	Assistant Engineer, in charge of Division of Inspection.
Felix Kleeberg	Chemist, Bureau of Engineering.
Charles J. S. Doherty	Superintendent, Asphalt Plant, Bureau of Engineering.
Benjamin P. Benjamin	Clerk, Bureau of Engineering.
Col. Frank H. Hines	Superintendent, Public Buildings and Offices.
Bernard J. Corcoran	Supervising Inspector, Bureau of Public Buildings and Offices.
John H. Stewart	Principal Assistant Engineer, Bureau of Public Buildings and Offices.
Andrew A. Lanahan	Clerk, Appointment and Local Boards Division.
Henry H. Lloyd	Auditor, Audit and Account Division.
Alexander Cooper	Clerk, Correspondence Division.
James H. McDermott	Clerk, Payroll Division.
Edward Brady	Clerk, in charge of Bureau of Encroachments and Incumbrances.
Neil L. O'Callaghan	Purchasing Agent.
Charles Brady	Superintendent, Bureau of Buildings.
William D. Brush	Assistant Superintendent, Bureau of Buildings.
Louis Frank	Secretary to Superintendent, Bureau of Buildings.
Rollin C. Bastress	Chief Inspector, Bureau of Buildings.
Frederick C. Kuehnle	Chief Inspector, Bureau of Buildings.

REPORT OF CONSULTING ENGINEER FOR 1925

During the year 1925 the office of the Consulting Engineer was engaged in the more important matters as listed herein, and in addition gave the requisite attention to the routine duties assigned to it pertinent to general administration, matters before the Local Boards of Public Improvements and matters for the consideration of the Board of Estimate and Apportionment and its various committees.

The following are the more important matters:

Elevated express highway along the Hudson River and the relocation of the New York Central Railroad tracks in connection therewith.

Proposed Hudson River Bridge at West 57th Street.

Traffic studies in connection with the original "Miller Traffic Relief Plan."

Highway improvement of Depew Place, Park Avenue and Vanderbilt Avenue in the Grand Central Terminal zone.

Manhattan Municipal Terminal Market.

Sewage disposal, with special reference to the treatment plant on Ward's Island.

Removal of subway kiosks from highways for the benefit of traffic.

Manhattan Bus Routes.

ELEVATED EXPRESS HIGHWAY ALONG THE HUDSON RIVER, ETC.

The railroad operation in connection with the freight service of the New York Central Railroad Company on the west side of the Borough of Manhattan on the surface of 10th and 11th Avenues, West, Canal and Hudson Streets and on certain cross streets in the territory of the 30th Street Yard, has been the subject of great annoyance to the public for a number of years, and though numerous plans for the betterment of the situation have been presented from time to time, it was not until January 1925, when the Honorable Julius Miller, President of the Borough of Manhattan, presented a plan to the Board of Estimate and Apportionment, which combined the construction of an express highway for vehicles, the freeing of the surface of the streets for ordinary vehicular and pedestrian traffic and the making of adequate provision for the operation of the necessary railroad facilities essential to the continued development and growth of the city and its commerce, that a solution was presented that attracted favorable comment and consideration.

In March 1925, the plan, which was then before the Committee of the Whole of the Board of Estimate and Apportionment, to permit it being studied and discussed by those interested, was referred back to the office of the President of the Borough of Manhattan for the purpose of continuing the study of details and to give due consideration to such criticisms as had been presented in connection with the preparation of a final proposal to be submitted at some future date.

PROPOSED HUDSON RIVER BRIDGE AT 57TH STREET

When the North River Bridge Company applied to the Board of Estimate and Apportionment for consideration of its proposal to build a bridge across the Hudson River at about West 57th Street, the matter was referred to a committee representing the Board of Estimate and Apportionment, which, in turn, referred the more pertinent engineering questions to a subcommittee of engineers, of which your Consulting Engineer was a member.

Under date of January 8, 1925, the subcommittee of engineers presented its report, which summarized studies covering matters as to whether or not the location and clear height above mean high water would be detrimental to commerce and navigation, the estimated traffic that would be added by the construction of the bridge and the effect thereof on the existing street system of the Borough of Manhattan, the feasibility of connecting the

existing rapid transit systems of Manhattan with a future rapid transit system across the bridge, and the advisability of connecting the Manhattan terminal on the North River with the Manhattan Terminal of the Queensboro Bridge by an elevated highway.

TRAFFIC STUDIES

In connection with the Miller Traffic Relief Plan studies were continued to determine the growth, direction, origin and destination of borough traffic and its relation to interborough and interurban traffic, its daily, weekly and monthly fluctuations, decentralization of industries, increase of facilities and reduction of unnecessary traffic movements.

The work of this office on borough traffic and highway matters and also of myself as a member of the Advisory Committee on Traffic Relief involved original studies and research as well as critical examination of reports, projects and proposals submitted to the committee, among such being a study for a partial elimination of the vehicular grade crossing at Broadway and Manhattan Avenue, which resulted in a report that the large cost was not warranted at this time in view of financial needs for more important improvements; a list of more drastic traffic regulations which it was thought the Municipal Assembly could inaugurate; taking of systematic traffic counts; the reapportionment of roadway widths; the removal of encroachments from roadways; the curtailment of parking privileges; the increased restriction of the height of buildings; additional arcades; use of containers for delivery of merchandise; construction of parking garages, particularly in the downtown section; motor vehicle and gasoline taxes; regulating size and weight of motor vehicles; connecting up and improving existing traffic arteries; express highway along the west waterfront to connect with Westchester County parkways; an improved connection between the street system and Grand Boulevard and Concourse in The Bronx; the development of Hell Gate Bridge as a highway connection between Manhattan, The Bronx, and Queens; construction of bridge and tunnel between Manhattan and Queens; traffic arteries between Brooklyn and Long Island City; removal of gratings and kiosks from the roadway of Fourth Avenue in Brooklyn; the proposed Interborough Parkway between Brooklyn and Queens and the depression of the Long Island Railroad Tracks on Atlantic Avenue, Brooklyn.

HIGHWAY IMPROVEMENT OF DEPEW PLACE, PARK AVENUE AND VANDERBILT AVENUE IN THE GRAND CENTRAL TERMINAL ZONE

The last annual report chronicled the approval of the Board of Estimate and Apportionment of the agreements negotiated with the New York Central Railroad Company for constructing overhead vehicular roadways around each side of the Grand Central Railroad Station, crossing over 45th Street above grade and then joining Park Avenue at grade at 46th Street, and for widening the roadways of Park Avenue from 46th Street to 57th Street.

At that time this agreement had been attested to by all contracting parties except the Comptroller and it was not until the last day of the year that his signature to the deeds and easements, essential in consummating the agreement, was secured.

This agreement, consummated on December 31, 1925, is the result of three years of long and tedious negotiations, the more important engineering features of which were conducted by the late Mr. Amos Schaeffer, Consulting Engineer. The plans for this improvement provide for such changes in the highway system in the vicinity of the Grand Central Station as will permit of expediting the movement of vehicular traffic, relieving the congestion of cars in intersecting streets and as well be of material aid to pedestrian traffic.

MANHATTAN MUNICIPAL TERMINAL MARKET

Additional studies to those of previous years were developed for a wholesale market for foodstuffs at the West Washington Market site, which resulted in a somewhat smaller site at Gansevoort and West Streets being recommended, and for which an ordinance is pend-

ing. Some three hundred car loads of perishable produce will be handled on this site as tentatively approved, for which detailed construction plans are now being prepared by the Department of Markets.

SEWAGE DISPOSAL

The contamination by sewage of waters surrounding the Borough has become so great that it is feared it is rapidly approaching a menace. The matter is being studied not only by this office but by others in this and other boroughs. Conferences with other borough officers have been held with a view to united study and action for final disposition or treatment or both.

As stated in the last annual report, the first step in a comprehensive plan for an economical and sanitary way of disposing of the sewage was taken in proposing the construction of a sewage disposal plant on Wards Island. There is sufficient area north of the railroad viaduct for a plant that will serve not only Manhattan but also portions of The Bronx and Queens. Conferences have been held with the officials in charge of the island toward having the state release sufficient area for disposal purposes and providing additional space on the south side of the island by building a sea wall and filling in behind it to offset that area taken for the disposal plant.

SUBWAY ENTRANCES

The practice of locating subway entrances and kiosks within sidewalk areas results not only in narrowing sidewalks in such places and thereby creating a danger point but prevents widening the roadway, where it could otherwise be done, except at considerable expense and involving tedious negotiations. When these entrances are covered with kiosks they create an additional menace by obstructing the view of both pedestrians and drivers. Effort is being made to remove the kiosks and have the entrances to the subway placed within private property lines. The kiosk at the northeast corner of 42nd Street and Madison Avenue is one of the worst of these obstructions to pedestrian and vehicular traffic and as a result of negotiations an agreement has been drafted with the parties concerned which will permit of placing this entrance to the subway within the building and also permit of widening the roadway in 42nd Street, between Madison and Vanderbilt Avenues. Negotiations are under way for similar removals of kiosks at other points in the borough.

MANHATTAN BUS ROUTES

The question of surface transportation has been one of considerable importance and numerous proposals in the matter of the co-ordination of trolley and bus service have been considered and studied.

The ideal solution of a system of bus routes for Manhattan is seriously handicapped by the presence of existing franchises both for surface railroad lines and for the Fifth Avenue Bus Company.

A series of reports submitted to the Board of Estimate and Apportionment by the Board of Transportation and the Division of Franchises of the Board of Estimate and Apportionment were not only carefully studied and analyzed by the engineers of the Borough President's office but as a result thereof a comprehensive plan was prepared by them and the Borough President reported to the Board of Estimate and Apportionment under date of July 30, 1925 to the effect that the plan of the Board of Transportation essentially conforms to the backbone of the system prepared by the engineers of his office and that it is believed that certain of the proposals that were under consideration for the operation of buses in the Borough of Manhattan are such as to lend themselves to this type of transportation for the Borough and that in the preparation of final agreements certain extensions and modifications to meet local requirements may be provided for.

Respectfully submitted,

JOHN F. SULLIVAN,
Consulting Engineer.

January 15, 1926.

REPORT OF ACTIVITIES OF LOCAL BOARDS

I beg to submit the following report of the activities of the local boards for the year 1925:

During the year 1925 the Manhattan Local Boards considered 34 petitions for local improvements. Of this number 26 were approved, 1 denied, 1 filed, 1 to be decided in executive session, 1 withdrawn by our engineers, and 4 laid over until 1926.

Among the important improvements which received the approval of the Local Boards and were transmitted for the approval of the Board of Estimate and Apportionment were the following:

CONSTRUCTION OF SEWERS

Thayer Street, between Sherman Avenue and Broadway.

Nassau Street, between Spruce and Ann Streets.

58th Street and Fifth Avenue.

Edgecomb Road from West 167th Street to a point about 216 feet south of Jumel Place.

CONSTRUCTION OF PERMANENT PAVEMENTS

Unpaved portion of East Street, east side, from Broome Street to Delancey Street.

147th Street from Seventh Avenue to Lenox Avenue.

Northerly side of West 165th Street, between Audubon and Amsterdam Avenues.

Bennett Avenue from the south house line of West 184th Street to north house line of West 187th Street.

Unpaved westerly portion of roadway of Wadsworth Terrace from southerly building line of West 190th Street to a point about 182 feet northerly therefrom.

Jacobus Place from West 225th Street to Ft. Charles Place.

Laurel Hill Terrace from West 181st Street to West 184th Street.

Cumming Street from Broadway to Seaman Avenue.

CONSTRUCTION OF TEMPORARY PAVEMENT

Extension of 6th Avenue from Carmine Street to Canal Street.

REGULATING AND GRADING

Payson Avenue from south building line of Beak Street to Seaman Avenue.

Laurel Hill Terrace from West 184th Street to Amsterdam Avenue and West 186th Street from Laurel Hill Terrace to Amsterdam Avenue.

CONSTRUCTION OF RETAINING WALL

Supporting Fairview Avenue on its westerly side from Broadway Terrace to a point about 185 feet northerly.

In addition to the foregoing, the Manhattan Local Boards initiated proceedings for the construction of receiving basins at the following locations:

Northwest corner West 147th Street and Lenox Avenue.

Northwest corner West 126th Street and St. Nicholas Avenue.

Southwest corner West 147th Street and Lenox Avenue.

In front of 124 Ft. George Avenue.

Northwest corner West 34th Street and 8th Avenue.

Very truly yours,

E. F. McLaughlin,
Secretary of the Borough.

REPORT OF DIVISION OF AUDIT AND ACCOUNTS

There is transmitted herewith a condensed report of the transactions of the Division of Audit and Accounts of this Department for the year ending December 31, 1925.

Contracts entered into during year 1925

		Estimated Cost
55	Paving and Repaving Contracts	$2,978,823.14
79	Miscellaneous Contracts	919,105.40
6	Sewer and Reg. and Grad. Contracts	120,729.11
140		$4,018,657.65

Contracts completed during year 1925

		Amount
76	Paving and Repaving Contracts	$4,778,085.05
81	Miscellaneous Contracts	1,585,757.55
14	Sewer and Reg. and Grad. Contracts	396,473.94
171		$6,760,316.54

Statement of vouchers transmitted during year 1925 as follows:

No.	Class	Funds Chargeable					Totals
		Appropriations	Revenue Bonds	Corporate Stock	Special and Trust	Tax Notes	
2698	O. M. O.	$279,425.61	$6,988.09	$7,307.48	$25,107.84	$17,605.28	$336,434.30
721	Contract	608,526.83	462,661.66	993,252.03	9,312.78	3,590,932.00	5,664,685.30
282	Miscellaneous	15,859.60		3,703.32	508,457.90	3,964.51	531,985.33
520	Payrolls	3,884,143.48	61,451.76	116,597.15	84,072.56	298,976.02	4,445,240.97
4221	Total	$4,787,955.52	$531,101.51	$1,120,859.98	$626,951.08	$3,911,477.81	$10,978,345.90

4,442 Invoices amounting to $5,936,183.14 were received during 1925

No. of Orders	Open Market Orders for Year Ending December 31, 1925					Total
	Appropriations	Special and Reserve Bonds	Corporate Stock	Tax Notes	Special and Trust	
3570	$274,505.64	$7,590.39	$6,687.82	$19,857.45	$21,097.86	$329,739.16

Statement of moneys received by the Cashier during year 1925.

Special Fund—Restoring and Repaving—		
Deposits Regular	$461,501.13	
Deposits Deferred	193,866.75	
Permit Charges	8,327.40	
Excess Bills	11,838.49	
Corporation Bills	69,374.21	
		$744,907.98
Sinking Fund—Vaults		322,963.13
General Fund—Auction Sales	$3,863.82	
Sewers	9,171.00	
Sheds	6,155.00	
Misc. Accts. Receivable	3,319.71	
Redemptions	444.50	
Subpoena Fees	149.55	
Prints	123.75	
Public Comfort Stations	903.27	
Refunds	80.35	
Privileges	1,000.00	
		25,210.95
Special Security Deposits		12,512.50
Accounts Receivable—S-1000		86,074.00
CFM-28		139.20
RPM-32-AA		4,379.45
Total		$1,196,187.21

Respectfully submitted,

HENRY H. LLOYD,
Auditor.

REPORT OF DIVISION OF COSTS AND REFUNDS

	Permits Liquidated	Refunds	Bills	Deposits Thereon	Total Charges	Refunds	Excess Amounts Billed	Amounts Recovered from Deposits	Bills Paid	Total Amount Recovered
Corporations...	14,724	14	1,460	$3,190.88	$105,439.17	$1,008.28	$103,256.57	$2,182.60	$63,089.45	$65,272.05
Plumber and Builders	9,218	8,828	432	599,454.48	124,127.54	490,390.45	15,063.51	109,064.03	12,352.22	121,416.25

Bills Rendered to Railroad Company		Bills Rendered to Owner of Premises	
Number	Amount	Number	Amount
112	$475,037.12	50	$2,276.37

COST PER YARD OF WORK PERFORMED BY GANGS

	Material	Labor	Trans-portation	Overhead	Total
Granite on Concrete					
W. & T.	$0.36	$1.47	$0.12	$0.23	$2.18
Cuts	.36	1.77	.18	.29	2.60
Granite on Sand					
W. & T.	.10	1.30	.10	.12	1.71
Cuts	.10	1.41	.14	.23	1.88
Wood Block					
W. & T.	2.38	1.81	.17	.30	4.66
Cuts	2.38	.69	.08	.12	3.27
R. R.	2.55	2.02	.17	.32	5.06
Asphalt					
W. & T.	.47	.97	.22	.28	1.94
Cuts	.47	1.35	.26	.34	2.42
R. R.	.51	.83	.23	.27	1.84
Burner	.33	.65	.02	.10	1.10*
Concrete	.94	1.21	.29	.23	2.67
Retar	.09	.14	.02	.02	1.27

*Add 5 cents for rental.

During the year there were prepared 252 plumbers' refund schedules, an increase of 840 refunds over last year. Another comparison shows that while there were 21,790 permits issued upon which refunds were made or bills rendered, this division liquidated 23,942, exceeding by 2,152 the number of permits issued. This increase has permitted the recovering of $3,895.75 more than in 1924.

Continuing the method installed in 1923, by which the cost of cuts was separated from wear and tear, $3,966.00 more was recovered than would have been if the old method had been used, making a total of $14,666.00 for the three years.

L. A. McNally,
Clerk in Charge Costs and Refunds.

REPORT OF THE BUREAU OF ENGINEERING

To the Bureau of Engineering is committed the planning, construction and maintenance of the streets, roads and drives, including pavements, tunnels, viaducts and stairway streets, as well as the planning, construction and maintenance of the sewers and their appurtenances. This covers all such work in the Borough of Manhattan except that in the public parks.

The amounts expended for all these purposes during the year 1925 were:

Annual Tax Levy	$2,344,741.08
Corporate Stock	54,543.57
Special Revenue Bonds	336,165.26
Restoring and Repaving Accounts	678,774.43
Fund for Street and Park Openings	31,926.10
Street Improvement Fund	1,032,813.38
Tax Notes	3,620,763.17
Total	$8,099,726.99

The work of the Bureau is carried on by three main divisions, "Design," "Construction," and "Maintenance," each in charge of an engineer, who co-operate, and, together with the bureau head, insure a careful study and a proper execution of the great mass of engineering work which the department is charged with.

Herewith are listed the more important improvements completed during the year. A complete list of these improvements will be found in the tables appended to this report.

Riverside Drive improvement, 158th Street to Dyckman Street.
Fifth Avenue roadway widening, 8th to 13th Streets and 59th to 60th Streets.
Park Avenue—Street and roadway widening, east side, 32nd to 33rd Streets.
Second Avenue, roadway widening, 57th to 61st Streets.
Lexington Avenue—Roadway widening, 53rd to 62nd Streets.
West End Avenue, roadway widening, 69th to 72nd Streets.
Sixth Avenue Extension—Carmine to Laight Streets—Property acquired from Carmine Street to Broome Street and Watts Street to Laight Street.
Inwood Hill Park Additions—Land acquired.
Highbridge Park addition—Land acquired.
Ft. Washington Park Addition—Land acquired.

The following important new projects were studied and for some of them final plans were prepared:

Depressing Second Avenue at the Queensboro Bridge.
Widening 59th Street from Second to Fifth Avenues.
Express highway along Hudson River from Canal to 72nd Streets.
Express highway through Riverside Park, 72nd to 129th Streets.
Extension of Riverside Drive to and across Harlem River.
Central Park West improvement, 59th to 110th Streets.
St. Nicholas Avenue roadway widening, 110th to 169th Street.
Park Avenue roadway widening, 57th to 96th Streets.
Relief Sewer for 106th and 110th Streets siphon outlets into Harlem River.
Elimination of N. Y. C. R. R. West Side grade crossings, 125th to 135th Streets.
Regulating and grading Laurel Hill Terrace, 184th Street to Amsterdam Avenue.
Interboro Traffic Tunnel between Queens and Manhattan.
New Court House Site Street System.
Sewer in Avenue C, between 4th and 14th Streets.
Submerged outlet for sewer at 23rd Street and East River.
Reconstructing sewer outlet at 23rd Street and Hudson River.

Depew Place and Park Avenue Improvement

After years of delay this great improvement has passed all its preliminary stages and is now ready for actual construction. The opening of this new thoroughfare on the east side of the Grand Central Terminal will not only permit a division of the enormous north and south bound traffic at its most congested point, but, in addition, will carry it over two highly congested cross streets and, together with the widening of the roadways over the railroad structure in Park Avenue from 45th to 57th Streets, will result in an improvement, the full significance of which will not be fully appreciated until the work is completed. The agreement between the City and the railroad company, of which the final plans form a part, are all signed and the work of actual construction should begin early in the new year.

Second Avenue Depression

When in 1923 the Miller Plan for the Relief of Traffic was first made public, it was recognized that one of the most congested spots was the Manhattan end of the Queensboro Bridge at Second Avenue, between 59th and 60th Streets. The conditions then prevailing have continuously grown worse, so that immediate relief is imperative.

On May 28th, 1924, 32,673 vehicles crossed the bridge in daylight hours, and later counts made outside of the bureau indicate almost double this number. This traffic must dodge the posts of the elevated railroad structures as well as the north and south traffic on Second Avenue—trolley cars and other vehicles—and find its way in and out of a few 30 or 34 foot crosstown roadways in one of which there is a double track important crosstown railway. Added to this is the pedestrian traffic, all of which together at times form an almost hopeless tangle. The first step to remedy this is a plan to separate the bridge and avenue traffic by depressing a portion of the roadway of Second Avenue into a tunnel beginning at the north line of 57th Street and ending at the south line of 62nd Street, which will permit all of the Second Avenue traffic to pass under that coming over the bridge. The depressed roadway will be 45 feet wide, leaving roadways 18 feet and sidewalks 7 feet on each side.

Widening of East 59th Street

In order to give the change at the Queensboro Bridge maximum effectiveness, it is proposed to widen 59th Street from 60 to 110 feet by taking 25 feet from the property on each side. Even without the bridge traffic, this street with its trolley tracks is too narrow to serve its purpose as a crosstown street, and with the growing number of vehicles using the bridge it is in a state of continuous congestion. The time for this change is particularly apt in view of the demolishing of the old Savoy Hotel on the south corner of Fifth Avenue and the reconstruction of the old Netherland Hotel on the north corner. By making plans now, the cost of the widening project will be less and the owners of these plots can plan buildings fitting the position of the widened street.

Express Highway from Canal Street to 72nd Street

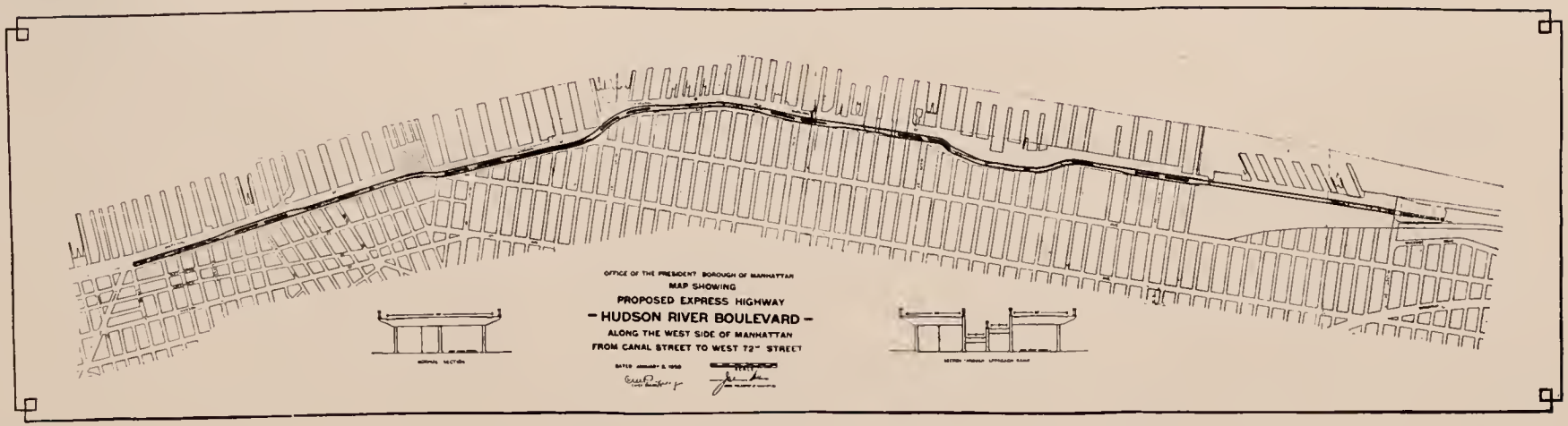
The proposal to build an elevated roadway for rapidly moving vehicular traffic is not a new one, but up to this time has not advanced beyond the condition of a thing to be hoped for. The necessity for such a street is universally conceded, particularly if it can be constructed with minimum injury to the adjacent buildings. This has led to the preparation of a plan for such an elevated structure along the wide river front street along the Hudson River, where the buildings are expected to be largely warehouses or used for purposes where the slight obstruction offered will not seriously affect their usefulness. The plan will be advanced to the Board of Estimate and Apportionment early in 1926.

From 72nd to 129th Streets

Above 72nd Street it is proposed to build an express highway over the New York Central tracks and extend Riverside Park outshore therefrom. While the highway plan is now being considered by the Board of Estimate and Apportionment, the Riverside Park Improvement, whereby hundreds of acres of park lands now under water are being raised to a practical elevation by filling in with material excavated from the subway in the vicinity, is being done by the Dock and Park Departments. This fill is so placed on both sides of the railroad that the latter will be effectually hidden, while over it, on columns set outside of their right of way, a wide express thoroughfare to connect with the one below 72nd Street will furnish a part of the long hoped for through road from the lower part of the Borough to the City Line.

Riverside Drive Extension to and Across the Harlem River

With the decision to finally develop Riverside Park and Drive from 72nd to 129th Streets and the practical completion of the section from 155th to Dyckman Streets, arises the necessity to prepare for its extension so that it will connect with the new system of parkways now being discussed by the Bronx Borough authorities and the State Council of Parks. In this connection it may be pointed out that the present Broadway Bridge over the Harlem River


OFFICE OF THE PRESIDENT BOROUGH OF MANHATTAN
MAP SHOWING
PROPOSED EXPRESS HIGHWAY
– HUDSON RIVER BOULEVARD –
ALONG THE WEST SIDE OF MANHATTAN
FROM CANAL STREET TO WEST 72ND STREET

EXPRESS HIGHWAY FROM CANAL TO WEST 72ND STREET

is the only connecting link on the west side of the borough with the Bronx and Westchester Counties, and all the traffic both from Riverside Drive and Broadway must use it. Some years ago the Hudson Fulton Bridge was planned as a great memorial structure connecting Manhattan and the Bronx from the top of Inwood Hill. The construction of such a structure would take years of time and huge sums of money. The enormous increase in traffic demands another Harlem River crossing and it has raised the question whether a construction of different and less monumental bridge would not provide sufficient facilities without altogether sacrificing the element of beauty to which the great bridge gave expression. It has been proposed to build a lower structure over the Harlem River and valley which will carry both the New York Central Railroad as well as the driveway.

Central Park West

At present this 100 foot avenue bordered on the east by Central Park, with its two car tracks close to the east curb, furnishes only minimum traffic facilities, the available roadway outside of the trolley track providing only three lanes for vehicular traffic altogether. This condition causes much dodging of vehicles, and as all the passengers from the trolley must cross their paths, the risk to the pedestrian is unusually great, without any compensating advantages to the drivers. The excavation for the new subway furnishes an occasion when a change can be made with the least inconvenience and outlay. It is proposed first to widen the roadway to 69 feet, reduce the sidewalks to 15 feet on the west side and 16 feet on the east, and either to move the trolley tracks to the center of the roadway or, if a satisfactory arrangement can be arrived at, take them out of the avenue altogether by rerouting the line through another avenue. This can be done without affecting the accessibility of the property in the vicinity of Central Park West, the new subway providing the necessary traffic facilities.

St. Nicholas Avenue, 110th to 169th Streets

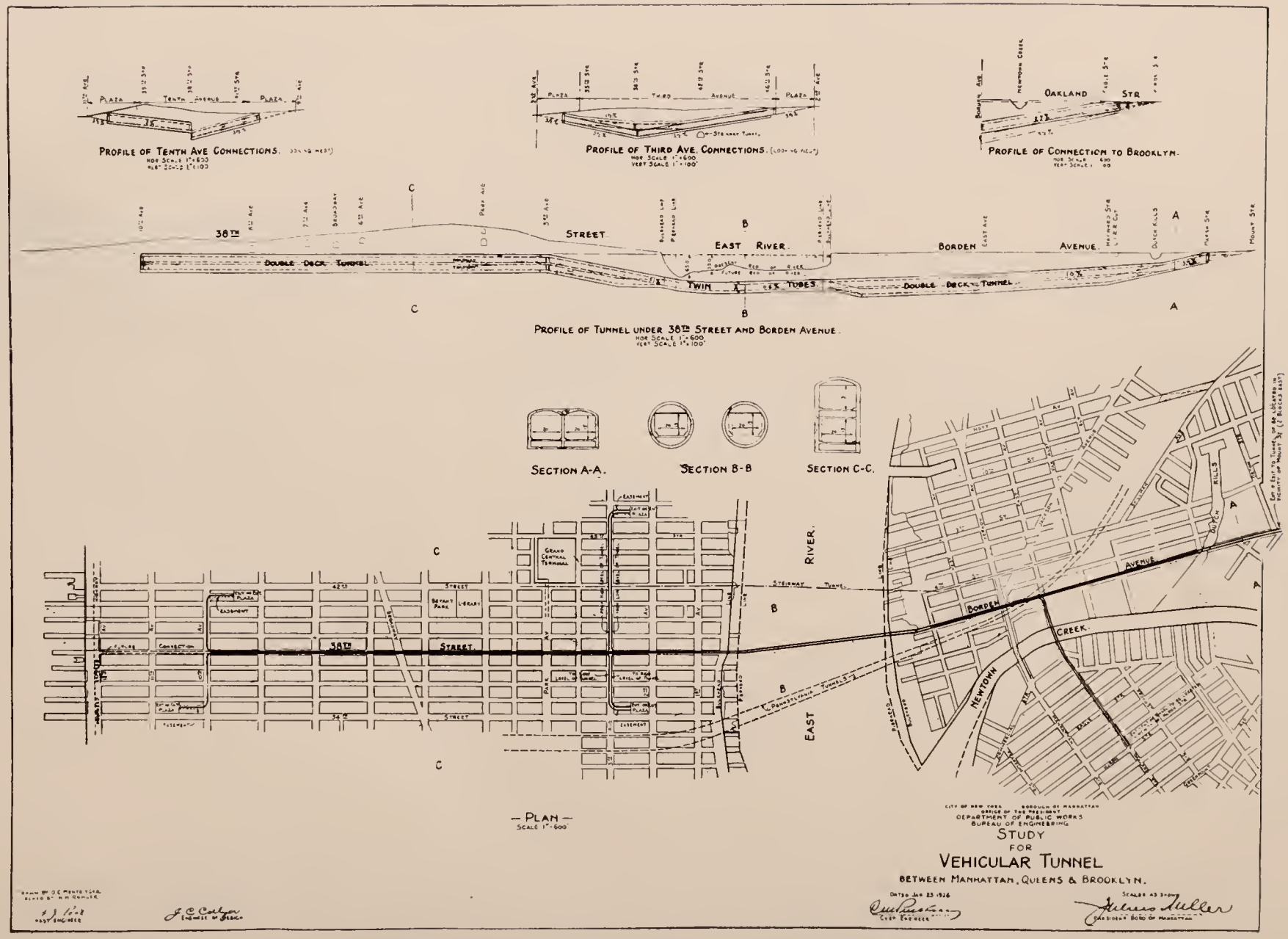
This avenue is one of the few uptown diagonal thoroughfares and consequently is of considerable traffic importance. From 122nd Street to 168th Street it is being excavated for the subway which, like in Central Park West, furnishes an opportunity for a roadway change that will provide increased facilities for traffic. In stretches it is now encumbered with two trolley tracks, which, besides reducing the available roadway, have a slowing effect on moving vehicles. By taking strips from the sidewalks and adding them to the roadway some improvement is possible.

Relief Sewer for 106th and 110th Streets Sewer Siphons

For some years the area between 90th and 125th Streets, Harlem River and 8th Avenue comprising some 400 acres, has been drained by two large sewer siphons which pass under the subway at 106th and 110th Streets at a depth of about 16 feet below high water. While these have given no serious trouble up to the present time, they have been a source of anxiety to this bureau due to the total absence of relief sewers in case of a stoppage of the siphons, which would flood a large area. It has therefore been determined to prepare plans for a relief sewer in 111th Street, through which any serious surcharge of the present sewers could be led into the Harlem River without damage to the vicinity.

Facilitating Interborough and Crosstown Traffic

The traffic count on May 28th, 1924, showed that 67,000 vehicles used the bridges and ferries across the East River between Grand and 92d Street during the 12 hours between 7 A. M. and 7 P. M. Of these about 1,600 came over the ferries and the rest were almost equally divided between Manhattan and Queensboro bridges. Practically all of this traffic moved east or west for longer or shorter distances and then moved to the north and south



FACILITATING INTERBOROUGH AND CROSSTOWN TRAFFIC

avenues to its destination. The 1,600 vehicles using the ferries in this long distance are negligible, but the 32,400 moving at each of the bridges, presents a problem for which the existing street plan does not furnish a solution, and at the time of maximum travel in the morning and evening the vehicles move in a helpless procession through the adjacent streets, entailing a loss of time and money with a general inconvenience for all, for which a remedy must be found. This remedy is confined to two alternatives, one an additional bridge and the other a tunnel. The first while relieving the present bridges would produce a similar if somewhat less congested condition at another point, while the latter can be planned so as to not only avoid congestion but to act as a distributing artery at other points in this borough. Based on this preliminary study both of the need and cost of a new line of communication between this borough and Queens, a more careful examination of the practicability of an interboro tunnel that in the future might even be carried under the Hudson, has been undertaken in this office. In outline, it is proposed to construct a tunnel from some point in the Borough of Queens under the East River and then across the Borough of Manhattan. Preliminary examinations have shown that it is practical to build such a structure to carry four lines of large and wide vehicles—two in each direction, separated from each other—at a cost per mile probably less than that of the present underground railways and that it will be accessible to and from the north and south avenues, without any traffic crossings, so that a continuous moving stream of vehicles will furnish far greater facilities than a structure above ground. It has the further advantage that at both ends and all along its line feeders can be provided with but a minimum disturbance of present conditions. As practically all the traffic using the present bridges as well as that which will use this tunnel goes either north or south the additional great advantage accrues that vehicles can leave or enter at the most convenient north and south avenues, and then at once proceed to their destination without crossing the others. This will not only be a convenience but also tend to relieve the north and south arteries of just that much intersecting traffic. Not only will it serve interboro traffic but it will permit local traffic to go across the borough without the interruptions that today make such a trip a very slow and uncertain one due to the necessary traffic stops that delay vehicle movement on the surface. It is believed that this feature alone will go a long way to justify such a project.

It may seem that such a tunnel is a radical remedy but the congestion of traffic is rapidly assuming the form of a disease and like in medicine dangerous physical disturbances require a major operation to save the life of a patient and to carry the simile further, after the operation the mode of life of the patient must be governed as far as possible so as to prevent a repetition of the trouble. In other words it is not only necessary to remedy the present traffic conditions but means must be found if possible to stop or at least reduce the trouble. An obvious one is to reduce congestion of population at critical points; but a more obvious necessity is to prevent congestion at new points that produce sore spots that will become harder and harder to cure as they increase in number. A case in point is the construction of large manufacturing buildings in the thirties where the narrow streets now existing cannot possibly provide sufficient traffic accommodations. To permit such buildings to do even a minimum business, alone requires more than the street space now available, will close them to all other traffic and as all of them are one way streets will result in a detour of not less than two blocks and probably more, with the resultant overloading of these cross streets and the avenues adjacent.

A careful consideration of the problems of which this is an illustration is increasing and urgent and a solution can only be found in two directions. One by adjusting the traffic requirements of a proposed building to the facilities available or by increasing these facilities to meet these requirements of the buildings. Both involve radical changes in present methods of zoning and street planning. A minimum requirement under present conditions should be, that space for parking and for the loading of business vehicles should be provided on private

NEW RIVERSIDE DRIVE AND SHELTER HOUSE AT INSPIRATION POINT

property, in a manner that will not encumber the public street or affect its traffic, vehicular or pedestrian. This can easily be done and will involve no greater hardship on the property owner than that of providing for his own business from which he draws some of his profits instead of obtaining the latter at public expense or inconvenience. Even this restriction will only be an amelioration of an obstruction to vehicular and pedestrian traffic that under present conditions is intolerable.

Any interference in the use of private property, particularly real estate, is only excusable by the highest public necessity and after every effort has been put forth to find remedies for an evil existing or threatened, but after all the general good rather than personal advantage must be the controlling motive in any governmental project or regulation and if this calls for a temporary sacrifice it will be very quickly made good by the general progress of the community, which is the aim of city government. As the case stands at present such sacrifice must be made if the borough is to hold its own to say nothing of keeping up with the progress of the times. This is not a problem for traffic experts but for city planners who understand the requirements of this borough. Holding this view, the activities of the office have been directed in finding a remedy to meet these conditions.

From the preceding, it will be seen that the work of this Bureau has resulted in a substantial increase in the necessary material changes in the Borough and even at some points, like Riverside Drive, some have approached the aesthetic. Many as are the various projects here described, it must be remembered that they are all limited by the prosaic factor of cost. While this limitation is obviously necessary, the question, "Is such a strict limitation always to the best interests of the City in the future?", has occasionally obtruded itself and in some cases we have felt that a policy without what is often called "vision" on the whole retards the real progress of the Borough.

Bureau of Engineering Divisions

The number and variety of projects and problems that come before the Bureau of Engineering always yield a full year and their solution depends to a large degree upon the assistance rendered by the divisions and their staffs to which they must be referred for detailed study or execution. To their cooperation the success of the Bureau is largely due.

C. M. Pinckney,
Chief Engineer.

DIVISION OF DESIGN

During the past year this Division has, as usual, been intrusted with the making of all surveys, investigations, studies, designs, estimates and reports; the preparation of all maps, contract drawings and specifications which are required by the Bureau of Engineering and the operation of the Department Map Room, the printing press, the blue printing machinery and the photostat machine.

Contract plans and specifications for various kinds of improvements were prepared; for

Paving Work, estimated cost	$3,100,000.00
Sewer Construction, estimated cost	76,000.00
Regulating and Grading, estimated cost	395,000.00
Miscellaneous	125,000.00

Sidewalk and curb grades for 737 new private developments were furnished to owners and architects.

Preliminary and final layout maps, rule maps and damage maps were prepared for acquiring 565 parcels of land for additions to the present street and park system of this borough.

TRAFFIC IMPROVEMENTS

Extensive studies, involving plans and estimates, were made for improving the traffic situation at several of the most congested locations.

Queensboro Bridge Plaza

The conflict which now exists between the vehicular traffic seeking to enter or leave the Queensboro Bridge and all north and south traffic on Second Avenue will be ended when the plan for depressing the roadways and trolleys on Second Avenue, between 57th Street and 62nd Street is completed.

Hudson River Boulevard

In order to provide an express highway along the west side of Manhattan from Canal Street to 129th Street, numerous studies were made. From Canal Street to 72nd Street the proposed highway will be located in West Street, Marginal Street, 13th Avenue and 12th Avenue, while north of 72d Street the plan provides for an elevated highway over the right of way of the New York Central Railroad.

Additional Vehicular Connections Between Manhattan and Queens

Analysis of available traffic data, studies and estimates are under way to determine the location and type of structure best suited to accomplish this purpose.

Street Widenings

4th Avenue, 12th to 14th Streets;
Irving Place, from 14th Street South;
Allen Street, from Houston Street to East Broadway;
59th Street, Fifth Avenue to 2d Avenue;
Baxter Street, Canal Street to Park Row;
State Street, at Battery Park

have all been studied with the idea of suggesting some physical widening in order to relieve traffic congestion.

Roadway Widenings

In accordance with the Miller Plan, resolutions for widening many crosstown streets and several avenues were prepared after careful study.

Avenues affected by subway construction will be widened at the time the final street restoration is made. Central Park West, from Columbus Circle to 110th Street, and 5th Avenue within the same limits, will, when improved by widening, be important links in the plan for mid-town relief.

Riverside Drive West Viaduct

The contract plans for the construction of a viaduct in Riverside Drive West from 155th Street to a connection with the completed Riverside Drive at 165th Street, are under way. This viaduct will permit through traffic on Riverside Drive and avoid the sharp narrow turns at 157th Street.

SEWER IMPROVEMENTS

A modified drainage plan for relief sewers in the district along the Harlem River, now outletting through the siphons under the 4th Avenue subway at 106th and 110th Streets, has been prepared. While these siphons have in the past caused little trouble by clogging, that possibility is always present and the drainage plan just completed will, when carried out, eliminate a very serious hazard involving the entire sewage flow from about 400 acres.

Avenue "C" Sewer

Contract plans are under way for the reconstruction of the sewer in Avenue "C", from 4th Street to 14th Street, and the construction of storm overflows in East 8th Street and in East 12th Street. The existing sewer in Avenue "C" is inadequate and in such a dilapidated physical condition that it is no longer economical to repair it.

Thirty-five Local Board matters, estimated to cost $650,000, were prepared and submitted for consideration.

RAILROAD NOTICES FOR STREET REPAIR

During the last four months 638 sets of twenty-day notices to railroads to repair the street surface adjacent to their tracks, were prepared. This work was formerly done in another division.

All specifications for materials and supplies required for maintenance and use are now prepared in this Division.

MAPS FOR CORPORATION COUNSEL

During the year 57 surveys were plotted and maps prepared for use of the Corporation Counsel in suits involving the City of New York.

LIEN MAPS

Fifty-five Lien Maps were prepared during the year.

SIDEWALK ASSESSMENT LISTS

One hundred thirty Assessment Lists were prepared for laying sidewalks.

GENERAL ASSESSMENT LISTS

Assessment Lists were prepared for the following improvements:

Ten Sewers and Basins
Ten Regulating and Grading
Eleven Paving.

SEWER CHANGES IN CONNECTION WITH NEW SUBWAYS

Plans for all sewer changes in connection with the new Washington Heights Subway were examined and reported on. As a result of these studies, many vital changes and additions were requested and the cooperation of the Board of Transportation was secured in all cases.

The force employed in the Division of Design has averaged about 75 men and 3 women. To their hearty cooperation is due whatever success may have attended our earnest endeavors during the past year.

In order to retain several of the lower priced assistants, it will be necessary to raise the rates of compensation now paid.

Attached hereto are the detailed reports of the heads of the various sections comprising the Division of Design.

J. C. Collyer,
Engineer-in-Charge, Division of Design.

CITY PLAN AND VIADUCT SECTION

DIVISION OF DESIGN

The duties of the City Plan and Viaduct Section of the Division of Design may be divided into two principal activities. The first of these is the making of preliminary studies and preparation of the final plans for improvements, such as the laying out of new streets and parks, the extending and widening of existing ones and matters relating to traffic improvement. The second principal activity at present is the design and preparation of the contract plans for the Riverside Drive West Viaduct.

The volume and importance of this work has made it necessary recently to assign elsewhere the preparation of damage maps for street and park opening proceedings in this Borough and certain other minor duties formerly done in this section.

The major improvements worked on during the year are as follows:

Allen Street Widening

The tentative map for this improvement was adopted by the Board of Estimate and Apportionment in 1924. The preparation of the final map was completed during the year and advanced to the Board of Estimate and Apportionment, where it is now under consideration. Under this plan Allen Street will be widened approximately 87 feet between West Houston Street and Division Street. Between Division Street and East Broadway, Pike Street will be widened in order to provide an outlet into East Broadway.

Queensboro Bridge Approach

Studies for traffic relief at the Manhattan approach to the Queensboro Bridge were continued during this year with the result that the most economical plan for adequate relief is deemed to be the depression of a portion of the roadway of 2d Avenue so as to pass under the bridge approach at 59th Street and 60th Street thus separating 2nd Avenue traffic from bridge traffic. A final plan for this improvement was prepared and is now under consideration by the Board of Estimate and Apportionment.

4th Avenue, 12th Street to 14th Street Widening

Fourth Avenue, being the connecting link between Lafayette Street on the south and Park Avenue on the north, is a heavy traffic street. South of 12th Street and north of 14th Street it is 100 feet wide, but between the above streets it is much narrower. This leads to serious traffic congestion. A number of studies and cost estimates were prepared for widening the avenue to a width of 100 feet.

Express Highway, West Side, Between Canal Street and 72nd Street

One of the measures proposed for traffic relief is the construction of a new highway which shall be free from the frequent interruptions of crosstown traffic. It is obvious that such a highway cannot be located on the surface and must therefore be either elevated or in tunnel. To tunnel one of our central avenues, such as 5th Avenue, is extremely costly. To locate an elevated roadway on any of our central avenues is not to be considered. Studies were therefore made with the view of locating an elevated highway along the exterior and marginal streets on the Hudson River waterfront where it would be largely free from the objections which its location on one of the interior avenues would be accompanied with. Tentative plans locating an express highway on West Street, 11th Avenue, 12th Avenue and 13th Avenue, between Canal Street and West 72nd Street are now in course of preparation.

Riverside Drive West Viaduct

Preliminary authorization for the construction of this viaduct was granted by the Board in June of this year. Work is now proceeding on the preliminary design of this structure, which will be followed by the preparation of the contract plans. The viaduct will extend northerly from 155th Street for a distance of approximately 1,200 feet. It will be 100 feet wide with an average height of about 60 feet.

Additions to Inwood Hill Park and Isham Park, Damage Maps

The draft damage maps for this acquiring title proceeding were completed early in the year. The maps show the territory to be acquired divided into 361 separate parcels.

6th Avenue Extension, Damage Maps

The damage maps for this improvement were started and completed during the first half of the year. The maps show 204 parcels of improved property.

From time to time this section is called upon to make studies and reports on many proposed improvements, to prepare tentative and final maps, surveys, etc. A summary of work completed by the section during the year is appended hereto.

Respectfully,

A. J. Peck,
Assistant Engineer.

SUMMARY OF CITY PLAN AND VIADUCT SECTION WORK

Layout Maps	29
Change of Grade Plans	1
Filing Copies of Adopted Maps	29
Encroachment Maps	2
Local Board Reports	1
Local Board Sketches	2
Miscellaneous Plans	15
Charts	8
Studies of Proposed City Plan Changes	11
Reports on Proposed City Plan Changes	26
Reports on Jurisdiction	2
Miscellaneous Reports	11
Cost Estimates	7
Rule and Damage Maps in Quadruplicate	32

DESIGNING SECTION
DIVISION OF DESIGN

Force Employed

The average force employed during the year consisted of two assistant engineers and four draftsmen.

Value of Work Performed

The various kinds and the number of improvements for which plans, specifications, estimates, etc., were prepared are as follows:

7 Sewer Contracts	$75,624
16 Paving and Repaving	595,147
7 Regulating and Grading	394,250
13 Miscellaneous	86,783
Total	$1,151,804

Local Board Matters

Sketches, estimates of cost and statements covering 27 matters, consisting of regulating and grading, paving, sewers, stairways, etc., were prepared for presentation to the various Local Boards for consideration as assessable improvements. The total estimated cost of these was $518,725.00. Favorable action was taken and preliminary authorization recommended on work to the value of $494,225.00.

Miscellaneous Sketches and Charts

During the year 84 miscellaneous sketches, charts and working drawings were prepared, covering practically all phases of work done in this Borough.

Investigations and Reports

Seventy-nine investigations and reports covering various subjects were made during the year, among which was a joint examination of sewers by representatives of this Department, the Board of Estimate and the Board of Transportation. This examination was made for the purpose of determining the behavior of the different materials used in sewer construction and to observe whether sewage had any deteriorating effect on concrete sewers. Careful examinations failed to show any evidence of defects.

Miscellaneous Plans Prepared

Seven standard drawings were revised and four new standards prepared. New inlet and basin gratings were designed to remedy defects which were found during the recent study and investigation of existing gratings. The new type gratings will greatly improve the surface drainage of the streets.

Plans Under Way

Plans have been prepared for two pedestrian tunnels under Riverside Drive; one near 172nd Street and one at 181st Street, which when constructed will enable pedestrians to pass beneath the drive free from dangers from vehicular traffic.

In connection with the sewage treatment plant at Canal and West Streets designs were made for the automatic shut-off of the sewage influent in case of failure of the power source. This includes the installation of a storage battery and switch board with complete interlocking devices which will operate entirely without manual attention, thereby eliminating the human equation entirely. Designs have also been prepared for a grit chamber as a part of the treatment plant.

Revision of the 300 foot scale general sewer plans of the Borough has progressed during the year. Three of the old tracings which had deteriorated beyond repair were revised and redrawn.

Respectfully,

Wm. F. Mercer,
Assistant Engineer.

SUMMARY OF DESIGNING SECTION WORK

Contract Plans Prepared Sewers	7
" " " Repaving	16
" " " Regulating and Grading	7
" " " Miscellaneous	13
" " Underway Sewers	4
" " " Miscellaneous	2
Contract Specifications and Estimates Prepared Sewers	7
" " " " " Repaving	19
" " " " " Reg. and Grad.	7
" " " " " Miscellaneous	26
" " " " Underway Sewers	4
" " " " " Miscellaneous	2
Local Board Sketches Prepared	27
" " " Underway	1
" " Estimates Prepared	27
" " " Underway	1
Working Drawing Prepared	9
Modified Working Drawing Prepared	1
Charts, Diagrams and Tables	3
Field Examinations and Reports Made	28
Reports	51
Miscellaneous Sketches and Drawings Prepared	71
" " " " Underway	4
Standard Specifications Rewritten	4
" Drawings Prepared	7
" " Revised	4
" " Underway	1
Record Sewer Drawings 60 foot Scale Underway Sheets	6
" " " 300 " " Prepared "	6
" " " 300 " " Underway "	2
Outside Plans Reviewed for Approval	18
Change of Grade Maps Prepared	1
" " " " Underway	0
Preliminary Estimate of Cost Prepared	50
" " " " Underway	3

PAVING SECTION

DIVISION OF DESIGN

As heretofore this section prepared practically all of the paving, repaving and street widening contracts for the past year. Appropriation for General Repaving work amounted to $1,750,000, $950,000 provided for main traffic arteries, $220,000 for the widening of streets for traffic relief and $88,400 for the first paving of unpaved streets making a total of $3,008,400 for all classes of paving work in the Borough.

The average force assigned to this work consisted of one assistant engineer and nine draftsmen. Of this force five men were constantly engaged on various phases of paving and repaving work during the year. Two men were almost constantly engaged on Private Developments for new building construction, one man on permanent records and railroad work, and one man on miscellaneous work of various kinds.

It was necessary, in order to expedite the letting of the repaving contracts at as early a date as possible, to advance the contract plans and specifications without grades and to develop the grades at a later date. By this method it was possible to complete the major portion of the repaving program by July 1, for the first time in years.

The major repaving contracts awarded during the year were the repaving of Eleventh Avenue from 27th Street to 62nd Street, First Avenue from Houston Street to 23rd Street and Third Avenue from 72nd Street to 96th Street. The repaving of these roadways enabled the deflection of vehicular traffic from more congested north and south bound streets and avenues. Additional traffic relief has also been provided by contracts for widening the roadways of thirteen streets and avenues, the most important of which were Fifth Avenue, 9th Street to 12th Street, Fourth Avenue, 9th to 12th Streets, Lexington Avenue, 60th to 62nd Streets, Second Avenue, 57th to 60th Streets, West End Avenue, 69th to 72nd Streets and 57th Street, First to Second Avenues. These widenings provided 15,000 square yards of additional surface to the roadway area of the Borough.

During 1925 eight assessable improvement matters were prepared for the various Local Boards covering the first paving of unpaved streets, at an estimated cost of $154,347.

During 1925, 817 requests were received for curb and sidewalk grades for private building developments. Seven hundred and thirty-seven of these were answered by sending out grade sheets or by letters of instructions. This work was expedited to a considerable degree by the making of field investigations by employees of this section and the surveys by the field forces reduced correspondingly.

This section was also called upon during the year to furnish and prepare 638 sets of railroad notices to be served on the various railroad companies to repair the area required by law to be maintained by the various railroad companies.

Nineteen plans and estimates were prepared for sidewalk and pavement adjustments.

TRAFFIC ON WEST STREET

Assessment lists with the necessary computations were made covering 130 different locations where it was necessary for the city to relay the sidewalk or set or reset curb in front of property where the owners neglected or refused to comply with the city ordinances regarding these matters. The value of this work amounted to over $16,000. Lien maps covering 55 locations were also prepared.

For the use of the Corporation Counsel 7 maps were made in connection with accident cases against the City. Ninety-two miscellaneous charts, drawings and estimates and 176 reports on various matters were also prepared during the year. Thirteen T Mark diagrams used by the Construction Division and property owners on widening contracts were also completed.

In connection with new subway contracts underway, it has become necessary to make studies leading to the correction of faulty grades and drainage conditions existing along the various routes. A considerable amount of time has already been devoted to assembling skeleton block street diagrams and 150 sheets have been prepared to date. It is the intention to use the data and surveys obtained by the division of engineers of the Board of Transportation on this work. This data is now being compiled by them and it is expected to be available to this department in a short time, after which the grades will be developed as required. One man has been engaged on this work for some time past.

There were plotted and entered in the permanent records of this office the final engineer's returns of completed work on 70 paving contracts.

Tabulation of paving, repaving and widening work done is submitted separately.

It is believed that the morale of the force has, generally speaking, continued good during the year, and that the work completed reflects credit upon the spirit of cooperation evidenced by the majority of employees of this section.

Respectfully,

Louis S. Furtnett,
Assistant Engineer.

SUMMARY OF PAVING SECTION WORK

Contract Plans for Paving Unpaved Streets		5
Specifications	(Sets)	5
Estimates	(Sets)	5
Contract Plans for Street Widenings and Repaving the Widened Portion Only		7
Specifications	(Sets)	7
Estimates		7
Contract Plans for Widening and Repaving the Entire Roadway		6
Specifications	(Sets)	6
Estimates		6
Contract Plans for Repaving Various Streets		29
Specifications	(Sets)	29
Grades Developed for Repaving Contracts Under Construction		1
Private Developments		737
Reports and Diagrams, Estimates, prepared for submission to the Local Board for regulating and grading and paving unpaved streets in the Borough		8
Resolution prepared for the removal of encroachments and the widening of various streets for traffic relief		7
Railroad Notices Prepared for service on the various Railroad Companies to make repairs in Railroad Area	(Sets)	638
Plans and Estimates for Pavement and Sidewalk Adjustments		19
Computations of quantities and Assessment List for laying sidewalks at	(Locations)	130
Lien Maps	(Locations)	55
Plans for the use of the Corporation Counsel in connection with accident cases against the City		7
Grade Sheets prepared for use in connection with restoration of Grades to be developed along the new Subway Routes	(Sheets)	150
Miscellaneous Charts, Drawings and Estimates		92
Change of Grade Maps		2
Reports on Water Grants		4
Reports, Miscellaneous		176
Engineers' Final Returns of completed work, mapped and entered in the office records		70
Open Market Orders		2
T Mark Locations for Street Widening		13

FIELD AND SURVEY SECTION
DIVISION OF DESIGN

The strength of the force at the beginning of the year was 22 transitmen, rodmen, axemen, etc., and on December 31, 1925, 27 men, with an average for the year of 25 men. The addition of several young men during the past year was fortunate and showed excellent results. The morale of the force continued excellent and the quantity and quality of work performed compared favorably with the preceding year.

A brief description of some of the work completed follows:

Base Lines

Established new base line on Fourth Avenue from 15th Street to 42nd Street, which is to be tied in to primary traverse later.

Bench Levels

Completed four level circuits, establishing 25 new benches and checking the elevations of 50 old ones.

Monuments

Reset and referenced 18 monuments, necessitated by building and subway construction.

Rain Gages

Set up and operated 3 rain gages in the 41st Street Drainage Area.

Regulating and Grading

Made surveys consisting of laying out, cross-sectioning and sounding on
Riverside Drive West from 155th Street to 161st Street.
Laurel Hill Terrace from 184th Street to Amsterdam Avenue.
Payson Avenue, Beak Street to Seaman Avenue.

Repaving

The larger jobs completed were:
Eleventh Avenue, Bloomfield Street to 22nd Street.
Whitehall Street, South Street to Bowling Green.
Seventh Avenue, 23rd Street to 30th Street.

Street Layout

Survey was made for the preparation of the Final Layout Map for widening Allen Street from East Broadway to 1st Street. The survey took in an area bounded by Bowery, Ludlow Street, East Broadway and 1st Street.

Another survey was made for the new street layout at Queensboro Bridge and for depressing Second Avenue under 59th Street and 60th Street.

Title Proceedings

The damage survey for the Extension of Sixth Avenue from Carmine Street to Canal Street was completed and preliminary monument lines established. Permanent monuments will be placed as soon after the buildings have been razed as practicable.

The Topographical Map of the Addition to Highbridge Park was completed.

Traffic

Studies were made from time to time during the year in preparation for possible traffic counts.

Sewers

Work on the survey for reconstructing the Avenue "C" Sewer from 4th Street to 14th Street is about 80% complete and for the sewer at West 23rd Street from Eleventh Avenue to Pierhead Line is about 60% complete.

It is considered advisable to mention again the deplorable condition of Bench Marks and Monuments in the Borough. This situation is becoming worse each year due to new subway construction as well as building operations. The necessary steps should be taken promptly to rectify matters in this regard.

Respectfully,

J. E. L. Ryan,
Assistant Engineer.

SUMMARY OF FIELD AND SURVEY SECTION WORK

Building Lines	1
Bench Level Runs	5
Maintenance Division (Surveys for)	3
Monuments	18
Miscellaneous	20
Paving	12
Private Development (Surveys)	85
Private Development (Inspections)	274
Repaving	18
Regulating and Grading	10
Sewers	15
Street Layout	13
Title Proceedings	5
Widening Roadway	16

DRAINAGE SECTION

DIVISION OF DESIGN

In addition to the preparation of a number of smaller drainage plans, a comprehensive drainage plan for Sewerage District #10 was made by this squad during the year. The district, 850 acres in area, is bounded approximately by Harlem River, 8th Avenue, 90th Street and 125th Street. The principal outlets are at 106th Street and 110th Street and the Harlem River. These trunk sewers are carried under the subway at Lexington Avenue by inverted siphons. The district is a low-lying one and tide water extends west of 5th Avenue on the main trunk lines.

Features of the new drainage plan are:

1. Trunk line sewer in 100th Street from 5th Avenue to the Harlem River.
2. Storm relief sewer in 111th Street from 5th Avenue to the Harlem River.
3. Interconnection of 106th Street, 110th Street and 111th Street trunk lines by means of overflows along Park Avenue.
4. Correct size of sewer for every block throughout the district of 850 acres.
5. Intensive utilization of East 118th Street and East 114th Street outlet sewers.
6. A system of sanitary sewers for that part of the district where the sewer invert elevations are one foot or less above mean high water.
7. Concentration of sanitary flow at 110th Street and Harlem River.
8. Provision of treatment plant or pumping station with submerged outlet at 110th Street and Harlem River.
9. Ready adaptation of the sanitary system to the Ward's Island scheme with little or no change in the event that plant is constructed.

During the year, in cooperation with the Board of Transportation, increased attention has been devoted to the careful checking over of all plans for sewer changes along proposed subway lines that have been submitted by the Board. The work involves all sewer changes in over 10 miles of new subways and its importance is due to the fact that these sewers must be maintained by this Department when completed. Many important changes have been made at the request of this Department. This work, involving considerable calculation, must be done promptly and needed changes made before construction is too far advanced. This matter will become of greater importance and volume during 1926.

Respectfully,

H. J. Rover,

Assistant Engineer.

SUMMARY OF DRAINAGE SECTION WORK

Assessment Work

Number of lists forwarded	31	
Total values of bid prices of contracts		$139,069.85
Total assessed valuation of property		$223,227,900.00
Number of plots assessed	1,016	
Lin. ft. lot frontage assessed	130,480	
Acreage assessed	1,160	
Benefit Maps prepared for City Plan work	3	

Subsurface Work

Number of permit applications examined	825
Number of vault plans examined	900

Drainage Work

Drainage plans prepared	6
Drainage plans under way	1
Letters to Board of Transportation relative to sewer changes along proposed subway routes	69
Miles of new subway for which plans are being submitted	10±
Sizes of sewers furnished Division of Construction	6
Miscellaneous Reports	40

MAP AND RECORD SECTION

DIVISION OF DESIGN

The most constructive work accomplished in this section during the past year has been the complete and exhaustive revision of the map and record filing system and the reindexing and combining of approximately 18,500 maps and records contained in the permanent files room of the Bureau of Engineering.

Heretofore the method of filing permanent records has been the Librarian point system. This system is extremely complicated to anyone not familiar with it and in addition has the fault of combining all maps of one size, irrespective of subject, into drawers according to location only, resulting in much irregular filing and considerable waste space impossible to utilize effectively. The disadvantages of this method are evident when the fact is considered that the filing cases are of special steel construction costing approximately $500.00 for each unit and that the room for expansion of filing equipment, as needs accumulate, is very limited.

Under the new system installed the maps and records, after a complete inventory was made and all plans carefully combined and checked, have been filed, 1st according to size and 2nd according to Acc. No.

When a ease is completely filled it is now known beyond question that there is no waste spaee and that new equipment is required. The main advantage of the new method, aside from the gain in filing spaee, is the ease and dispateh with whieh any maps can now be found and the reduetion to a minimum of the possibility of mislaying or improperly filing records.

This change has enabled the eoneentration of files to such an extent that 12 complete drawer seetions, the duplieate of whieh would cost approximately $1,800, are now available for future use.

Respeetfully,

GEORGE A. SAUER,

SUMMARY OF MAP AND RECORD SECTION WORK

Photostats	5,700
Lothoprints, paper	440
" eloth	760
" traeing cloth	428
Blueprints, paper	14,028
" eloth	924
Photographs Taken	19
" Enlarged	3
Photo Prints Made	96
" Mounted	86
Films Developed	96
Van Dyke Negatives	92
" Prints	627
Mimeograph Steneils (106,500 Imprints)	586
Job Printing (36,800 Imprints)	57
Printing Titles and Notes	407
Cutting (approximate number of sheets)	83,000
Requisitions	88
Plans Filed Aee. #25,214 to Aeet. #25,485, inel	271
Plans Borrowed and Returned	19,000
Plans Checked and Inventory Taken and Refiled	16,750
Prints Furnished to Corporation Counsel for Suits Against the City	791
Print Sales	$122.55

DIVISION OF CONSTRUCTION

The following items of eonstruetion made the year 1925 eonspieuous:

Streets Widened

5th Avenue—9th to 13th Street	Widened 10 ft.
5th Avenue—59th to 60th Street	Widened 7½ ft. E. side only
4th Avenue—32nd to 33rd Street	Widened 18 ft. E. side only
2nd Avenue—57th to 58th Street	Widened 10 ft.
Lexington Avenue—53rd to 62nd Street	Widened 13 ft.
32nd Street—6th to 7th Avenue	Widened 4 ft.
41st Street—Lexington to Park Avenue	Widened 4 ft.
41st Street—Park to 5th Avenue	Widened 4 ft.
47th Street—5th to 6th Avenue	Widened 4 ft.
55th Street—5th to 6th Avenue	Widened 4 ft.
61st Street—Park to 5th Avenue	Widened 4 ft.
West End Avenue—69th to 72nd Street	Widened 20 ft.

1st Avenue, Houston to 23rd Street and from 58th to 59th Street, was repaved, eompleting the repaving of this rapidly growing and eongesting traffic artery from Houston Street to the Queensboro Bridge.

11th Avenue was repaved from Little West 12th Street to 62nd Street, thereby immeasurably increasing the usefulness of this great traffie artery for the great railroad and eoastwise and transatlantie steamship piers.

On the following streets the street railway tracks have been removed, lowering the eongestion and increasing aeeordingly their ability to handle traffie:

Canal Street	Forsythe Street to East Broadway
Lispenard Street	Houston to 23rd Street
14th Street	Avenue B to Avenue D
1st Avenue	Houston to 59th Street
8th Street	Avenue D to Lewis Street

An experiment was tried in the use of quick setting eement. The interseetion of Lafayette and Houston Streets, one of the busiest intersections in the City, was eompletely repaved in about 60 hours of eontinuous work with no interruption to traffic.

Riverside Drive

The Riverside Drive improvement, from 165th Street to Dyckman Street, was begun in 1924, completed in 1925 and offieially opened on May 30th, 1925, inereasing a roadway width of 30 ft. to 60 ft. and

converting an ordinary roadway into a boulevard, the beauty of which has been enhanced by the planting of some 400 Norway maples, the laying of some 10,000 sq. yds. of sodding and the seeding of approximately 30,000 sq. yds. of filled-in area. In addition to these quantities the following were the larger and more important items in the contract:

Earth Excavation	27,000	cu. yds.
Rock Excavation	44,000	"
Filling	100,000	"
Rubble Concrete (retaining walls)	26,000	"
Concrete Foundation for Pavement	23,000	"
Sheet Asphalt Pavement	75,000	sq. yds.

Chittenden Avenue

The original contract on Chittenden Avenue called for the complete grading of the easterly half of the street, the westerly portion being carried down on a slope of 1 to 1, with a rubble concrete retaining wall carried up to a sufficient height to meet the slope. The sidewalk width of 8 ft. left a roadway of only 12 ft. This width was further reduced by a guard rail fence to approximately 10 ft. As soon as property owners began to improve the property, it was found that this width of street would be insufficient and it was decided to complete the regulating and grading. This necessitated the building of a retaining wall on the westerly side approximately 40 ft. high on top of which is a masonry parapet 4 ft. above the street grade. This improvement was completed in 1925 and trees were planted on both sidewalks—spaced 50 ft. apart—adding much to the beauty of the improvement and affording one of the finest views of the Hudson River to be found in Manhattan.

Wadsworth Terrace

The contract for the regulating, grading and constructing of drains on Wadsworth Terrace, 188th to 190th Street, including the building of retaining wa'ls on the southerly side of 188th Street, from Wadsworth Avenue to Wadsworth Terrace, and the westerly side of Wadsworth Terrace, from 188th to 189th Street, was completed this year. The sewer is built on the shoulder of retaining wall, thereby insuring against settlement of sewer in the fill area.

Seaman Avenue and Cumming Street

The regulating, grading and building of a sewer in Seaman Avenue, Dyckman Street to Academy Street, and Cumming Street, Seaman Avenue to Broadway, completed in 1925, opened up for improvement the adjacent properties and much building construction work has been completed or is under way.

Laurel Hill Terrace Sewer

The Laurel Hill Terrace sewer, from 179th Street to 184th Street, has made possible the improvement of this large area of adjacent property, which has been lying idle for years due to a lack of drainage facilities.

R. F. Lewis,

Assistant Engineer in Charge.

DIVISION OF MAINTENANCE

Highways

The Division of Maintenance is charged with the care of about 490 miles of streets, 540 miles of sewers, 10,000 catch basins and inlets, two sewage screening plants, one sewage pumping plant, one asphalt plant, two garages with necessary machine shops to care for about 100 passenger and freight vehicles and other mechanical equipment and six corporation yards for the storage and distribution of materials.

The paved area of the Borough of Manhattan has not been increased materially during 1925; the principal change being Riverside Drive from 158th Street to Dyckman Street, from a surface treated macadam to an asphalt pavement.

This reduced somewhat the work of the Maintenance Division but the reduction was more than counterbalanced by the care of the parked area on the easterly side being added to the duties of the Division. The forces for the repair of pavements were increased by three asphalt gangs which began work about April 1st and the total yardage of repairs and restorations of pavements of all kinds has been increased about 100,000 square yards over 1924, which up to date had held the record.

The use of surface heaters to resurface asphalt and asphalt block pavements was continued and about 200,000 square yards of this work was done. Repouring of joints in granite pavements was done to a much larger extent than heretofore. This process adds much to the life of the granite blocks by cushioning the blow of wheels on the corners of the block and also adds to the comfort and smoothness of vehicular traffic.

There are still about 10 miles of streets in use without any pavement or only surface treated macadam.

The parked area of Riverside Drive mentioned above has required and received a considerable amount of work since it was assigned to this Division in June. Grass and weeds had to be cut, the areas around trees and plots at Inspiration Point cultivated and loose rock removed from the steep natural slope of the park space.

INTERIOR FULTON STREET SEWER

Municipal Asphalt Plant

During the year one unit consisting of a sand dryer and a top mixer with the elevators attached was changed from a belt driven only to an electric drive or belt as desired. This makes it possible to run the one unit alone, supplying a small quantity of asphalt mixture when the rest of the plant is shut down on account of the weather, vacation or repairs. During the main vacation period, two asphalt gangs were thus supplied with materials for repairs and cut restoration.

Among the improvements made on or around the Asphalt Plant by the plant force were the replacement of all wooden leaders and platforms about the elevated asphalt cement tanks and the recovering with canvas and painting of the same tanks. A new steel Portland cement shed was also erected at a more convenient location for delivering to replace the old shed demolished to make way for the new garage.

The increase in street gangs entailed a corresponding increase in mechanical equipment of 3 steam rollers and 5 trucks and 3 passenger cars, 3 compressors and 1 Basin Machine were added to the equipment.

A 2-story garage as an addition to the present one was begun and practically completed within the year; while the addition to the limestone dust storage house with locker room and shower baths over it was about 90% completed.

SEWERS

The routine work of maintaining, cleaning and repairing the sewers of the Borough has been continued with a few serious breaks in the sewers and consequent stoppage of flow. In such cases immediate attention is given to relieve conditions by pumping the flow past the break and making repairs as rapidly as possible. Some of the most serious breaks have been due to excavations for buildings or duct lines alongside of the sewer which by, partially at least, removing the lateral support allow the sewer arches to collapse.

During the year work has been continued enlarging manholes in the granite heads of catch basins to permit of the use of the basin cleaning machines. Practically all basins north of 72nd Street can now be cleaned by means of the machines operating a grab bucket of orange peel type.

The amount of material removed from catch basins was about 10% over the amount removed in 1924, showing apparently a progressive increase due to methods of street cleaning.

Quite a number of our barrel sewers under piers have needed heavy repairs, to a large extent due to failure of the supports. These being timbers framed into the pier structure rotted away and the barrel sewer dropped. In all cases where possible the barrel is now hung from the pier floor system by screw rods admitting of easier adjustment.

A most valuable addition to the plant was a new 30 H.P. engine installed in launch "B", which is used for work on the barrel sewers. The old engine had given good service for years but had worn out so as to be almost dangerous to operate under conditions in the harbor.

There are about six miles of barrel sewers suspended from piers on the North and East Rivers.

The sewage screening plant at Canal and West Streets was turned over to the Division of Maintenance April 2, 1925.

This plant takes sewage from a large sewage district north and east of the plant. The rated capacity is about 40,000,000 gallons per day and consists of principally three chain belt screens, each about 54 x 6 feet and three centrifugal pumps—2 of 14,000 gallons per minute and 1 of 8,000 gallons per minute.

The materials removed by the screens is brushed off into hoppers and thence ejected by compressed air to a tank wagon which delivers it to scows for dumping at sea. Between 12 and 15 tons of screenings are thus disposed of per day.

To further improve conditions in the harbor in regard to sewage poured into it, a chlorine disinfecting plant has also been installed in conjunction with the screens and in the same building.

The operating power is electricity and the pumps start and stop automatically as the flow of sewage requires, the sanitary sewer being about 13 feet below the outlet sewer at or near tide level.

The entire plant is below street level, with the exception of a small structure containing the pipes delivering the screenings to the tank wagon.

The percentage of repairs shown below covers the amount of work on both asphalt and wood block pavements, as all wear and tear repairs in wood block are now made with asphalt.

Details of the operation of the Division are shown in the following tables:

R. A. MacGregor,
Assistant Engineer in Charge.

Area of Pavement Maintained and Cost of Repairs

	Asphalt	Wood Block	Granite
Net Area Maintained—square yards	5,132,760	506,585	2,628,188
Amount of Repairs—square yards	610,386	1,054	285,079
Percentage of Repairs	10.8%	0.0%	10.8%
Total Cost of Repairs	$1,028,496	$4,912	$366,363
Cost per sq. yd. to maintain	.17	0.00%	.14
Cost per sq. yd. cutout method	1.94	4.66	....
Cost per sq. yd Heater method	1.14	....	....
Cost per sq. yd Bituminous Filler	....	....	2.18
Cost per sq. yd. Sand Filler	....	....	1.71
Cost per sq. yd. Repouring Joints	....	....	.27

Area of Pavement Repaired and Restored in Square Yards

Kind of Pavement	W & T	Resurfacing Burner Method	Emergency		Pay Cuts	DWS Cuts	Sewer Cuts	Retar	Total
			Truck	Orders					
Asphalt	347,344	201,373	5,479	16,830	29,919	9,236	205	.....	610,836
Wood Block	340	.....	....	22	692	....	....	.....	1,054
Granite	130,595	.....	....	6,066	17,728	5,874	15	124,801	285,079
Total	478,279	*201,373	5,479	22,918	48,339	15,110	220	124,801	896,519
Concrete	.....	.....	....	11,664	20,299	7,812	92	.....	39,867

*Includes 6,807 sq. yds. Cutout.

Maintenance of Earth and Macadam Roads

Macadam Roadways Resurfaced	148	sq. yds.
Macadam Roadways Cleaned	17,626	"
Macadam Roadway Gutters Cleaned	16,040	lin. ft.
Dirt Roadways Cleaned	176,866	sq. yds.
Dirt Roadways Oiled	28,110	"
Dirt Roadway Gutters Cleaned	99,569	lin. ft.
Dirt Roadways Re-regulated and Regraded	58,894	sq. yds.
Flagging Reset	17	sq. ft.
Weeds Cut	70,891	lin. ft.
Stairways Kept Clean	47	
Drains Cleaned	30	
City Streets Cleaned	46	
Cave-ins Filled In (21)	95	cu. yds.
Refuse Removed	1,204	"
Sidewalks Cleaned	722	lin. ft.
Concrete Broken Down	2	sq. yds.
Filling in Dyckman Street Yard	325	cu. yds.

Materials Used

Ashes	2,904	cu. yds.
¾" Stone	11	"
Sand	4	"
Grits	2	"
Cement	24	bags
Earth (fill)	404	cu. yds.
Stone, Native	53	"
Old Asphalt Block (fill)	184	"
Road Oil	9,000	gals.
Tarvia K. P.	123	"
Spruce	66	pieces
Paint	75	lbs.
Turpentine	5	gals.
Pine Flooring (for Office)	300	ft.
Roofing (for Office)	5	rolls
Nails	4	lbs.
Herpicide for killing weeds	2	gals.

Materials Used in Repairs to Pavement and Quantity on Hand—December 31, 1925

Material	Quantity Used	Quantity on Hand Dec. 31, 1925
Asphalt Sand—cubic yards	41,849	2,000
¾" Binder Stone—cubic yards	18,571	1,100
Inorganic Dust—tons	7,132	1,185
Asphaltic Cement—gallons	1,415,112	100,000
Egg Coal—tons	489	150
Soft Coal—tons	285	0
Cannel Coal—tons	278	75
Buckwheat Coal—tons	2,232	200
Gasoline—gallons	138,539	5,000
Kindling Wood—cords	151	3
Granite Blocks (New)	70,495	7,000
Granite Blocks (Old)	86,094	34,096
Asphalt Filler—tons	1,198	117
Wood Block—3 x 8 x 3½	35,120	45,880
Kerosene—gallons	7,300	1,000
Portland Cement—bags	35,323	8,277
Paving Sand—cubic yards	5,677	1,500
Coarse Aggregate—cubic yards	2,800	2,300
Paving Grits—cubic yards	3,398	1,382
Durax Blocks	1,506	2,494
Alcott Key Blocks	....	17,250
Tarvia "KP"—gallons	294	.....

Production of Municipal Asphalt Plant

Boxes of Topping	59,549
Boxes of Binder	37,772

Equipment Maintained

Passenger Automobiles	20
5 Ton Trucks	35
3½ " Truck	1
2½ " Trucks	30
1½ " Trucks	8
Steam Rollers	23

Boats Unloaded

Asphalt Sand	66
¾" Binder Stone	36
Inorganic Dust	23
Asphaltic Cement	27

Repairs to Pavement Wearing Surface by Corporations and Paving Contractors Under Supervision of Highway Inspectors

Kind of Pavement	W & T Sq. Yds.	Cuts Sq. Yds.	Total Sq. Yds.
Sheet Asphalt and Asphalt Block	116	39,056	39,172
Wood Block	...	11,615	11,615
Granite Block	...	23,149	23,149
Total	116	73,820	73,936

Foundations Laid and Railroad Area Repairs Made by Corporations and Paving Contractors Under the Supervision of Highway Inspectors

Concrete Foundation	80,505	sq. yds.
Stone Base Foundation	12,143	"
Railroad Area Repairs (all kinds)	57,667	"

SEWERS—MAINTENANCE

Basins

Basins Inspected	38,038
Basins Cleaned	22,111
Basins Examined	794
Basins Relieved	2,147
Culverts Relieved	1,693
Culverts Examined	637
Sluice Basins Cleaned	3,520
Dirt Removed, cubic yards	42,752

Brick Sewers

Sewer Inspected, linear feet	357,358
Sewer Cleaned, " "	82,257
Sewer Relieved, " "	146,423
Dirt Removed, cubic yards	6,273
Syphon Sewers Examined	67
Manholes Examined	675
Manholes Relieved	175

Pipe Sewers

Sewer Inspected, linear feet	571,933
Sewer Cleaned, " "	328,416
Sewer Relieved, " "	484,106
Dirt Removed, cubic yards	672

Repairs

Basins Repaired	214
Basin Hoods Set	110
Basin Plates Set	110
Basin Covers Placed	74

Basin Heads Set	29
Basin Gratings Placed	99
Basin Washstones Set	4
Basins Built	2
Sluice Basins Built	1
Sluice Gratings Placed	1
Manholes Repaired	166
Manholes Built	5
Manhole Heads Set	171
Manhole Heads Set to Grade	17
Manhole Covers Placed	358
Manhole Rings Placed	24
Manhole Steps Placed	8
Cuverts Repaired	42
Culverts Built	1
Iron Goosenecks Placed	14
Drains Sealed	2
Drains Built	42
Herring Bone Bars Set	18
Brickwork Built, new, cubic feet	3,052
Brickwork Repaired, " "	1,234
Brickwork Pointed, square "	6,611
Cast Iron Pipe Laid, linear "	15
Pipe Sewer Built, " "	544
Spurs Placed	132
Stone Wall Repaired, cubic feet	36
Stone Wall Built, " "	228
Cuts Opened	297
Earth Excavated, cubic yards	1,348
Sheeting Placed, B M Feet	24,707
Sheeting Drawn, " "	20,968
Temporary Pavement Replaced, square feet	3,886
Sidewalk Relaid, square feet	423
Flagging Relaid, " "	261
Debris Removed, cubic yards	102
Repairs Around House Connections	387
Dead Connections Plugged and Repaired	221
Basin Heads Enlarged for Bucket	441

Barrel Sewers

Barrel Sewers Examined, linear feet	9,432
Bands and Hangers Placed	434
Bands Removed	105
Castings Placed	983
Wooden Manhole Covers Placed	4
Wooden Manhole Covers Built	3
Chocks Placed, linear feet	1,095
Staves Placed, " "	5,801
New Timber Built, B M Feet	25,637
Old Timber Built and Refastened, B M Feet	47,993
Rods Painted	698

Screening Plants

Dyckman Street—	
Sewage Screened and Dumped, cubic yards	561
Canal Street—	
Sewage Screened and Dumped, " "	2,573

Inspection Work

Corporation Inspections	9,640

Work Performed on Open Market Orders

Brick Sewer Repaired, linear feet	243
Brick Sewer Built, " "	208
Pipe Sewer Built, " "	30
Pipe Sewer Repaired, " "	32
Manholes Built	2
Masonry Done, cubic yards	12

Work Done by Compressor and Cement Gun

Sewer Repaired, linear feet	73

Brick Sewer Cleaned by Contract

Dirt Removed, cubic yards 4,200

The force employed on the maintenance of Highways and Sewers during the year was comprised of:

18 Gangs on Stone Pavements.
20 Gangs on Asphalt Pavements.
6 Gangs on Concrete Foundation for Pavements.
2 Gangs on Macadam and Unpaved Streets.
1 Gang on Highway Emergency Work.
7 Gangs on Basin Cleaning.
5 Gangs on Basin Cleaning with Machines.
4 Gangs Cleaning Pipe Sewers.
5 Gangs Cleaning Brick Sewers
8 Gangs on Sewer Repairs.
1 Gang on Barrel Sewers.
1 Gang on Basin Inspection.
4 Gangs on Sewer Emergency Work.

DIVISION OF INSPECTION

Permit Section

J. FRANK, Assistant Engineer-in-Charge

Character of Permits Issued

A—Deposit
B—Corporation
C—Emergency
D—Sidewalk Repair

Deposit Permits, classified as follows:

	Water	Sewer	Vault	Reset Curb	Miscellaneous	Canceled	Total	Amount
Double Deposits	2,651	598	115	129	128	91	3,723	$385,576.74
Single Deposits	449	218	205	7	902	52	1,833	12,963.19
Inspections and Incidentals thereto:								
Banner poles						...	11	340.00
Destroyed curbs						...	428	6,603.75
Corporation permits						2	28	106,564.15
Corp. Incid.						1	619	495.20
Building Material						68	2,473	228,631.00
Roofs and Sheds						20	761	6,173.00
Vault						22	572	322,882.77
Sewer Connections						24	900	9,171.00
						280	11,348	$1,079,400.00

The different permits covered by "B," corporation permits, are classified as follows:

Company	New Mains	Overhaul	Services	Repairs	Total
Electricity:					
Consolidated Telegraph & Electrical Subway Company	876	...	2,623	1,965	5,464
Empire City Subway Company	44	...	370	883	1,297
Gas:					
Consolidated Gas Co.	87	218	624	3,699	4,628
Steam:					
New York Steam Co.	67	3	143	478	691
Fire Department	1	...	...	14	15
Department Water Supply, Gas and Electricity	60	...	43	139	242
	Reset	Erect	Remove		
Lamps:					
New York Edison Co.	217	22	1	...	240
United Electric Light & Power Company	57	196	3	...	256
Railroad Construction and Repair:					
8th Ave. R. R. Co.					26
9th Ave. R. R. Co.					46
N. Y. Railways Co.					135
N. Y. Cen. R. R. Co.					5
3rd Ave. R. R. Co.					147
42nd St. Man. & St. Nich. R. R. Co.					103
Union R. R. Co.					5
Kingsbridge R. R. Co.					12
N. Y. City Interboro R. R. Co.					10
Dry Dock East B'way. & Battery R. R. Co.					66
2nd Ave. R. R. Co.					18
N. Y. & Harlem R. R. Co.					63
Belt Line R. R. Co.					17
Dept. of Plant & Structures					47
					13,533

TYPICAL ARRANGEMENT OF SUBSTRUCTURES—INTERSECTION OF WALL AND WILLIAM STREETS

C—Emergency Permits

Repairs made under Police Permits on account of the inadvisability of waiting until an ordinary permit could be obtained.

To Whom Issued	
Consolidated Gas Co.	26
Empire City Subway Co.	31
N. Y. Mail & Trans. Co.	11
New York Steam	1
	69

D—Sidewalk Repairs

Sidewalk Repair Permits	2,344

Recapitulation

Deposit Permits	11,585
Corporation Permits	13,532
Emergency Repairs	80
Sidewalk Repair Permits	2,344
	27,541

Summation of the length of all mains and services of 75 feet or more installed during the quarter.

	New Mains
Cons. Tel. & Elec. Sub. Co.	135,990 ft.
Empire City Subway Co.	8,285 "
Consolidated Gas Co.	8,610 "
New York Steam	13,805 "
	166,690 "

As a result of the work performed under the permits referred to above, it was necessary to restore the pavement disturbed. The following tabulation indicates the number of cuts made by the various agencies listed above, and the yardage involved.

	Cuts	*Yardage*
Consolidated Telegraph & Electrical Subway Company	5,960	66,370.2
Consolidated Gas Company	7,444	24,908.4
Plumber's Openings and Vaults	4,870	19,075.8
Dept. of Water Supply	3,627	20,205.2
Empire City Subway Company	1,597	8,709.2
New York Steam	1,242	17,477.1
Building Operations	177	7,192.7
Reset Curbs	58	715.5
Sewer	204	1,312.5
Cave-ins	1,580	8,866.0
Railways	186	2,465.5
Fire Dept.	29	188.2
City Departments other than Fire and Water Depts.	39	372.1
Miscellaneous	70	1,314.7
	27,083	179,173.1

PATROL SECTION

The total number of violations filed owing to defective sidewalks, unguarded cellar entrances, broken air vents and coal hole covers, unfenced lots, etc., is 6,058. Of this number 4,362 have been closed out, leaving 696 pending.

During the year 6,058 inspections and 12,762 reinspections were made.

The following table shows in detail the violations filed:

Violations filed	*Closed Out*	*Pending*
Sidewalks	5,038	669
Unguarded Cellar Entrances	68	8
Defective Air Vents	61	5
" Cellar Doors	51	3
" Coal Hole Covers	59	4
" Vault Lights	40	3
Fences	25	4
Unguarded Excavations	20	0
	5,362	696

In addition to the above there are 24 sidewalk violations pending since 1924.

In connection with the above, 130 jobs were undertaken by this department where owners failed to comply with notices sent them to repair defective sidewalks in front of their property.

The amount of work done at these locations was as follows: Concrete sidewalks, 46,045.06 sq. ft.; new blue stone flagging, 2,393.43 sq. ft.; old blue stone flagging relaid, 2,869.75 sq. ft.; new bluestone curb, 357.40 lin. ft.; old curb reset, 240.80 lin. ft.; cu. yds. of concrete 19.06 cu. yds. of backfill, 28.49.

The cost of this work was $16,980.39 and same will be assessed against the various properties involved.

SIDEWALK SECTION

In connection with the above due to the neglect of owners of abutting property to make the repairs required by law, the following work was undertaken together with the maintenance of sidewalks and fences adjacent to property owned by the City of New York, and under the control of this department.

		Average Price	*Total Cost*
Sq. ft. of cement sidewalk laid	86,616.02	.352	$30,488.33
Sq. ft. of old blue stone flagging relaid	5,481.60	.105	575.56
Sq. ft. of new blue stone flagging furnished	2,958.48	.35	1,035.46
Sq. ft. of new mastic S. W. furnished	743.80	1.02	758.67
Sq. ft. of platform S. W. relaid	41.35	.75	31.01
Linear ft. of old curb reset	473.10	.75	354.82
Linear ft. of new curb furnished	375.40	.75	281.55
Linear ft. of concrete fence	76.00	1.50	114.00
Linear ft. of concrete curb	51.00	.90	45.90
Square yards old granite pavement	17.00	2.50	42.50
Cubic yards backfill	23.50	.25	58.75
Cubic yards concrete	19.06	6.50	123.89
			$33,910.94

Incidental to these sidewalk matters, it was necessary to review a total of 3,920 plans filed with the Bureau of Buildings, to determine where changes were to be made that affected any part of the street. Of these 1,842 contemplated the construction of vaults or alterations to street structures which required our approval. This involved a total of 5,600 inspections in the field.

In addition, computations were made on 875 plans, representing a total vault area of 256,569 square feet, and a review of 97 surveyors' certificates, representing 37,257 square feet of vault area. There was an excess area found in 20 cases having a total square foot area of 1,961 square feet. There were 8 cases where refunds were made which required the return of payment on 1,463 square feet.

Due to requests from the Law Department arising from accident claims filed against the City, it was necessary to make 322 surveys; of said accidents 64 plans were prepared by the Division of Design under our supervision, 65 cases were tried in court and we gave testimony on 50 cases.

Very truly yours,

JOHN G. HORGAN,
Acting Assistant Engineer, Division of Inspection.

CHEMICAL AND PHYSICAL TESTING LABORATORY

The function of the Chemical and Physical Testing Laboratory is to control the quality of all materials used in the construction, maintenance and repair of pavements, roadway and sewers, and to check the quality of all supplies purchased and used by the several bureaus under the Borough President's jurisdiction. In addition inspectors are in constant attendance at contractors' paving plants, supervising the production of the various types of paving mixtures and controlling their manufacture.

The total number of samples collected and analyzed in the main laboratory, not including the numerous check tests made at plant laboratories, was as follows:

Asphalts	144
Asphalt Paving Cements	222
Asphalt Wearing Surfaces	1,179
Binder Mixtures	74
Binder Stones	40
Coarse and Fine Aggregates	255
Coals	111
Gasolines	138
Grouts	97
Hydraulic Cements	233
Inorganic Fillers	27
Lubricating Oils	184
Mortar Beds	24
Miscellaneous	207
Paints and Varnishes	43
Pavement Plugs	63
Sands (Asphalt)	72
Sands (Paving)	56
Total	3,169

In addition to this routine, analytical and inspection work, research work was continued with the end in view of improving the stability of our sheet asphalt pavements. These investigations indicate that a modification of the present formulae used in this type of pavement will be of decided advantage. Briefly stated, this modification would consist of the use of a well-graded sand containing the smallest size voids possible, sufficient filler to practically fill these voids and only sufficient bitumen to fill the voids in the filler and coat the particles of the mineral aggregate with the thinnest film possible.

Compared to our present formulae, this would mean increasing the filler in the mixtures from 10% to 15%, depending on the nature of the sand and decreasing the amount of bitumen 1% to 1.5% in the mixtures themselves. Theoretically, the less bitumen in the mixtures, providing a sufficient amount is added to properly cement the aggregates, the greater the stability and the less tendency towards displacement.

It is intended to try out these new mixtures on a practical scale during the coming construction season.

A new source of satisfactory asphalt sand has been made available during the past year, so that we shall not be dependent on practically a single source of supply as heretofore, for heavy traffic conditions.

The quality of all accepted materials and supplies was of the high grade required by our specification. In spite of the coal strike, deliveries of an exceptionally good quality of anthracite coal were made well into December.

It is a pleasure to commend the laboratory force for their diligence and for the interest which they have displayed in their work.

F. Kleeberg,
Chemist in Charge.

INDEX OF DATA SHEETS OF HIGHWAYS AND SEWERS IN THE BOROUGH OF MANHATTAN

Table 1. Sheet Asphalt Pavement Laid Under Contract During 1925.
" 2. Granite Block Pavement Laid Under Contract During 1925.
" 3. Asphalt Block Pavement Laid Under Contract During 1925.
" 4. Wood Block Pavement Laid Under Contract During 1925.
" 5. Pavements Laid Under Contract During 1925—Gross Area.
" 6. Regulating and Grading Contracts During 1925.
" 7. Contacts Registered or Awarded and Work not Begun in 1925.
" 8. Pavements Laid Under Contract, by Years, from 1900 to Date—Gross Area.
" 9. Average Unit Price for Contract Work from 1920 to Date.
" 10. Average Contract Price Per Square Yard for Pavements with a 6" or 9" Concrete Foundation.
" 11. Status of Pavements Under the Jurisdiction of the Borough President as of January 1st, 1926.
" 12. Tabulation of Repairs and Replacements as of January 1st, 1926—City Areas only.
" 13. Various Types of Pavement Under Jurisdiction of the Borough President as of January 1st, 1926.
" 14. Linear Feet of Sewer Built in 1925.
" 15. Sewer Removed During 1925.
" 16. Net Linear Feet of Sewer and Appurtenances Built During 1925
" 17. Increase in Length of Sewers and Number of Appurtenances from 1870 to Date.

TABLE

SHEET ASPHALT PAVEMENT LAID

Location	From	To	Fund	Former Pavement	Roadway	
					Length	Width
				BEGUN 1924 AND		
90th St.	3rd Ave.	5th Ave.	N.P.M. 37X.	S. A. on Stone	405	30
Riverside Dr.	165th St.	Broadway	N.P.M. 37U-C.F.M. 25	Macadam	*7,319	27
Riverside Dr.	900 N. 165th St.	Dyckman	N.P.M. 37U-C.F.M. 25	Macadam	10,695	60
Seaman Ave.	207th St.	215th St.	C.F.M. 25	None	1,273	44
				BEGUN AND		
Amsterdam Ave.	145th St.	155th St.	N.P.M. 67	S. A.on Stone.	3,020	18+18
Broadway	Columbus C.	79th St.	N.P.M. 67	Wood Bl. S.A.	2,158	30
Haven Ave.	177th St.	178th St.	C.F.M. 25.	None	302	30
Isham St.	Cooper	Seaman	C.F.M. 25	None	648	44—30
Cooper	207th St.	Isham St.				
Lexington Ave.	53rd St.	60th St.	N.P.M. 48J	S.A.	*1,588	13
Lexington Ave.	60th St.	62nd St.	N.P.M. 48Q	S.A.	*462	13
Mangin St.	Grand	Stanton	N.P.M. 67	O.G.	1,518	25
Riverside Dr.	.....and	Plaza Lafayette	C.F.M. 25	None	1,166	30
Riverside Dr.	165th St.	900′ N.	C.F.M. 25	Macadam	557	30
West End. Ave.	69th St.	72nd St.	N.P.M. 48Q	None	*734	20
2nd Ave.	57th St.	58th St.	N.P.M. 48Q	None	*175	10
5th Ave.	9th St.	13th St.	N.P.M. 48Q	None	*907	10
5th Ave.	59th St.	60th St.	N.P.M. 48J	None	*229	7.5
7th Ave.	53rd St.	59th St.	N.P.M. 67	S.A. on Stone.	1,807	46
23rd St.	5th Ave.	6th Ave.	N.P.M. 67	W.B.	920	34
32nd St.	6th Av.	7th Ave.	N.P.M. 67	S.A.	800	34
37th St.	Lexington	Madison	N.P.M. 67	S.A. on Stone.	811	30
41st St.	Park	5th Ave.	N.P.M. 67	S.A. on Stone.	824	34
42nd St.	Madison Ave.	5th Ave.	N.P.M. 37X	S.A.	402	40
47th St.	5th Ave.	6th Ave.	N.P.M. 67	S.A.	920	34
55th St.	5th Ave.	6th Ave.	N.P.M. 67	S.A.	920	34
59th St.	Ave. A.	1st Ave.	N.P.M. 37X	O.G.	613	30
61st St.	Park	5th Ave.	N.P.M. 37X	S.A.	820	34
67th St.	Central Park, W.	Columbus	N.P.M. 67	S.A. on Stone.	801	30
119th St.	Lexington	Park	N.P.M. 67	S.A. on Stone.	405	30
124th St.	Lexington	Park	N.P.M. 67	S.A. on Stone.	405	30
134th St.	Madison	5th Ave.	N.P.M. 37X	S.A. on Stone.	1,170	30
	Lenox	7th Ave.				
135th St.	Madison	St. Nicholas	N.P.M. 67	S..A on Stone.	3,160	43
165th St.	Edgecombe	Amsterdam	N.P.M. 67	O.G. on Sand	1,636	42
166th St.	Amsterdam	St. Nicholas		O.G. on Sand		
170th St.	Amsterdam	St. Nicholas		O.G. on Sand		
				Total,	38,157	

*Not included in totals.

I

UNDER CONTRACT DURING 1925

Yardage		Price per Sq. Yd. Pavement only		Price per Cu. Yd. Concrete		Total Cost	Working Days to Complete	Contractor	Notes
Gross Area	City Area	City Area	R. R. Area	City Area	R. R. Area				
COMPLETED 1925									
1,331	1,331	3.00	.....	10.00	.....	$ 7,896.00	26	James Gaffney	Mod'd Lex. to Pk.
22,585	22,585	2.67	.....	9.00	.....	144,325.00	90	Asphalt Constr'n Co.	Certain sect's only
54,456	54,456	2.95	.....	9.50	.....	257,679.00	143	Chas. D. Beckwith, Inc.	2" stone filled
6,268	6,268	3.42	.....	10.50	.....	57,614.00	53	AsphaltConstructionCo.	2" stone filled
COMPLETED 1925									
11,761	11,033	3.05	3.05	10.30	10.30	76,507.00	49	Gaffney Const. Co.	East Side Col. Cir. to 65th St.
14,688	14,652	3.79	.....	10.00	.....	105,422.00	54	Sicilian Asp. Pav. Co.	West Side 71st to 79th St.
1,033	1,033	3.06	.....	11.50	.....	6,465.00	9	Brusstar Constr. Co.	
2,613	2,613	2.90	.....	10.30	.....	22,576.00	30	James E. Gaffney	
2,278	2,278	3.11	.....	10.50	.....	33,903.00	34	W. J. Fitzgerald	Widen only
682	682	3.60	.....	10.75	.....	11,150.00	18	Sicilian Asp. Pav. Co.	Widen only
4,206	4,197	3.32	.....	10.50	.....	34,898.00	29	Uvalde Asp. Pav. Co.	
3,522	3,522	3.29	.....	12.50	.....	43,529.00	29	Brusstar Const. Co.	2" stone-filled—High Level
3,618	3,618	3.20	.....	11.00	.....	60,873.00	16	C. D. Beckwith, Inc.	2" stone filled
1,628	1,628	3.98	.....	12.00	.....	26,059.00	124	Uvalde Asp. Pav. Co.	Widen only—9"
192	192	3.20	.....	9.00	.....	13,931.00	22	J. Meehan & Son	Widen only—9"
1,070	1,070	3.47	.....	11.00	.....	23,157.00	20	W. J. Fitzgerald	Widen only—9"
193	193	3.40	.....	11.00	.....	2,795.00	12	W. J. Fitzgerald	Mod'd, E. Side only
8,677	8,003	3.81	3.81	9.80	9.80	67,199.00	30	W. J. Fitzgerald	9" foundation
3,476	3,476	3.44	.....	11.00	.....	16,977.00	6	W. J. Fitzgerald	Built up 5"
3,017	3,017	3.80	.....	9.80	.....	22,997.00	25	Uvalde Asp. Pav. Co.	Widen, 9" found'n
2,636	2,636	3.31	.....	10.50	.....	19,707.00	9	W. J. Fitzgerald	
3,079	3,077	3.36	.....	11.00	.....	25,848.00	24	W. J. Fitzgerald	Widen—9" founda.
1,792	1,644	3.80	3.80	12.00	12.00	14,307.00	18	Uvalde Asp. Pav. Co.	9" foundation
3,457	3,457	3.31	.....	10.50	.....	30,545.00	22	W. J. Fitzgerald	Widen—9" founda.
3,485	3,485	3.63	.....	10.00	.....	27,691.00	22	Uvalde Asp. Pav. Co.	Widen
2,036	2,033	3.60	.....	10.40	.....	14,001.00	17	Cleveland-Trinidad	
3,108	3,108	3.10	.....	9.50	.....	23,782.00	21	Uvalde Asp. Con. Co.	Widen
2,652	2,652	3.52	.....	10.75	.....	17,967.00	18	Sicilian Asp. Pav. Co.	
1,329	1,329	3.34	.....	10.50	.....	9,341.00	19	Interboro Asp. Pav. Co.	
1,335	1,335	2.65	.....	9.50	.....	8,071.00	19	Gaffney Const. Co.	
3,854	3,854	3.63	.....	3.63	.....	27,440.00	21	Asphalt Const. Co.	
15,153	14,420	2.81	.....	10.50	10.50	103,015.79	35	Asphalt Const. Co.	
7,607	7,607	2.95	.....	10.50	.....	47,444.00	28	Brusstar Const. Co.	
198,817	196,484					1,405,112.00			

TABLE

GRANITE BLOCK PAVEMENT LAID

Location	From	To	Fund	Former Pavement	Roadway	
					Length	Width
BEGUN 1924 AND						
Houston St.	Broadway	Bowery	N.P.M. 37X.	O.G.,G.B.,& S.A.	1,202	25
BEGUN AND						
Canal St.	Forsythe	E. B'way	N.P.M. 67	O.G.	1,348	39
Dover St.	South	Pearl		O.G. on Sand.	1,193	21 & 24
				O.G. on Sand.		
Frankfort	Pearl	Gold	N.P.M. 67	O.G.		
Duane St.	Hudson	Greenwich	N.P.M. 37X	W.B.	623	26 & 34
Hudson St.	Christopher	Bank	N.P.M. 37X.	G.B.	1,502	38
King St.	Varick	West	C.F.M. 25			
			N.P.M. 37X.	O.G. on Sand.	1,168	35
Lafayette St.	Intersection	Bond	N.P.M. 37X.	W.B.	100	48
Lafayette St.	Intersection	Houston	N.P.M. 37X.	G.B.	51	48
Lispenard	Broadway	W. Broadway	N.P.M. 37X.	O.G.	892	25
Peck Slip	Pearl	South	N.P.M. 37X.	O.G. & G.B.	573	125 to 36
Riverside Dr.	South of	Pl. Lafayette	C.F.M. 25	None	564	30
Wooster St.	Bleecker	Wash. Sq., So.	N.P.M. 67	O.G.	702	26
1st Ave.	Houston St	14th St.	N.P.M. 67	O.G.	3,980	60
1st Ave.	14th St.	23rd St.	N.P.M. 67A.	O.G.	2,668	60
2nd Ave.	45th St.	48th St.	N.P.M. 67	O.G.	818	46
2nd Ave.	58th St.	61st St.	N.P.M. 48Q.	G.B.	*523	20
3rd St.	Broadway	W. Broadway	N.P.M. 37X.	O.G.	957	28
3rd Ave.	79th St.	96th St.	N.P.M. 67A.	O.G.	5,075	22
3rd Ave.	125th St.	130th St.	N.P.M. 37X.	O.G.	1,615	23
4th St.	Broadway	McDougal	N.P.M. 37X.	W.B.&O.G.	1,829	32 & 27
4th Ave.	32nd St.	33rd St.	C.F.M. 25	G.B.	*228	18
8th St.	Lewis St.	Ave. D	N.P.M. 37X.	Belg. on Sand	306	30
11th Ave.	L. W. 12th St.	22nd St.	N.P.M. 37X.	O.G.	3,281	47
11th Ave.	27th St.	59th St.		O.G.	10,223	60
West End Ave.	59th St.	62nd St.	N.P.M. 67A.			
Little W. 12th St.	9th Ave.	10th Ave.	N.P.M. 67	O.G.	682	30
12th St.	Greenwich	West	N.P.M. 67	O.G.,-O.G. on Sand	784	30
14th St.	Avenue B	Avenue D	N.P.M. 67	O.G. on Sand.	1,687	53
16th St.	7th Ave.	9th Ave.	N.P.M. 37X.	S.A. on Stone.	1,597	30
34th St.	1st Ave.	Lexington	N.P.M. 67	O.G.	1,682	19 & 12
59th St.	1st Ave.	2nd Ave.		Belg. on Sand	650	16 & 30
				O.G. on Sand.		
1st Ave.	58th St.	Queen's Bridge	N.P.M. 37X.	O.G.	350	60
			C.F.M. 25			
93rd St.	Ave. A	1st Ave.	N.P.M. 37X.	O.G. on Sand.	613	30
124th St.	Lenox Ave.	7th Ave.	N.P.M. 67	S.A. on Stone.	750	30
125th St.	Intersection	Broadway	N.P.M. 37X.	S.A.	Irregular	162
128th St.	2nd Ave.	Park Ave.	N.P.M. 67	S.A. on Stone.	1,461	30
135th St.	Madison	St. Nicholas	N.P.M. 67	S.A. on Stone.	See Table I	.83
139th St.	5th Ave.	Harlem River	C.F.M. 25	None	323	30
41st St.	Lexington	Park	N.P.M. 37X.	A.B.	291	2′ & 34′
BEGUN AND						
4th Ave.	9th St.	12th St.	N.P.M. 48P.	None	*772	5′ to 12′
94th St.	1st Ave.	East River	C.F.M. 25	None	*515	30
				Total —	51,540	

*Not included in total.

II

UNDER CONTRACT DURING 1925

Yardage		Price per Sq. Yd. Pavement only		Price per Cu. Yd. Concrete		Total Cost	Working Days to Complete	Contractor	Notes
Gross Area	City Area	City Area	R. R. Area	City Area	R. R. Area				
COMPLETED 1925									
3,291	3,282	7.35	.....	8.50	.....	$ 29,068.00	29	St. George Granite Co.	9″ foundation
COMPLETED 1925									
5,898	5,750	6.38	6.38	7.50	7.50	54,478.00	39	J. Meehan & Son	Tracks removed
3,361	3,361	6.65	.....	7.50	.....	35,976.00	30	D. J. McCarthy	9″ foundation
2,200	2,200	7.00	.....	8.00	.....	23,360.00	27	Asphalt Const. Co.	9″ foundation
5,687	5,048	6.75	6.75	7.00	7.00	60,809.00	38	Asphalt Const. Co.	9″ foundation
4,544	3,899	6.55	6.55	7.50	7.50	45,432.00	32	Poirier Contg. Co.	9″ foundation
465	461	8.40	.....	10.50	.....	6,156.00	15	Peter Cramer	9″ foundation
277	277	8.80	.....	11.00	.....	3,326.00	6	J. Meehan & Son	9″ foundation
2,468	2,468	7.10	.....	8.00	.....	25,920.00	28	Asphalt Const. Co.	9″ foun., trck remd.
4,805	4,805	6.18	.....	7.50	.....	43,756.00	26	Colgan & Colgan	8″ built up
1,354	1,354	7.84	.....	12.50	.....	43,529.00	29	Brusstar Const. Co.	
2,007	2,007	6.78	.....	7.00	.....	20,048.00	24	J. Meehan & Son	
24,700	24,495	6.05	.....	7.00	.....	214,010.00	64	J. Meehan & Son	5¾″ built up tracks removed
16,677	16,479	6.32	.....	7.00	.....	152,890.00	59	J. Meehan & Son	Tracks removed
3,938	3,602	6.87	6.87	7.00	7.00	38,807.00	35	Casper Helbock, Inc.	4½″ to 9″
606	606	7.20	.....	9.00	.....	13,931.00	22	J. Meehan & Son	9″ foundation
2,930	2,929	6.65	.....	8.00	.....	31,689.00	19	Asphalt Const. Co.	9″ foundation
24,199	22,142	6.43	6.43	6.00	6.00	24,199.00	71	Casper Helbock, Inc.	5″ built up
7,764	7,040	6.39	6.39	7.50	7.50	70,099.00	44	Casper Helbock, Inc.	
5,936	5,604	6.59	6.59	6.30	6.30	56,249.00	42	J. Meehan & Son	6″ & 9″ foundation
417	416	7.50	.....	9.40	.....	5,483.00	18	Peter Cramer	Widen E. Side only
1,011	1,007	7.69	.....	9.00	.....	11,445.00	20	P. J. Kearns Const. Co.	Track removed
16,815	12,142	6.89	6.89	7.00	7.00	164,968.00	53	J. Meehan & Son	8¾″ built up
48,357	40,304	6.11	6.11	7.50	7.50	433,383.00	124	W. J. Fitzgerald	5′ built up
2,250	2,250	6.70	.....	7.50	.....	21,598.00	22	D. J. McCarthy	5″ built up
2,576	2,576	6.44	.....	8.00	.....	26,395.00	17	W. J. Fitzgerald	6″ & 9″ foundation
9,558	9,558	6.75	.....	7.00	.....	100,647.00	40	Casper Helbock, Inc.	Tracks removed 9″
5,274	5,271	6.37	.....	7.50	.....	49,871.00	34	W. J. Fitzgerald	
6,750	4,347	7.10	7.10	6.00	6.00	65,598.00	42	Poirier Const. Co.	
3,633	2,750	6.59	6.59	8.00	8.00	33,798.00	27	P. J. Kearns Const. Co.	Trks. remd. 1st Ave
2,028	2,028	6.50	.....	8.00	.....	19,895.00	29	Asphalt Const. Co.	
2,479	2,476	6.30	.....	7.50	.....	22,617.00	25	Asphalt Const. Co.	
218	203	7.07	.....	7.50	.....	7,939.00	20	Casper Helbock, Inc.	9″ foundation
4,814	4,806	6.23	.....	7.00	.....	42,453.00	32	St. George Granite Co.	
524	.....	.....	7.50	.....	10.50	.....	.....	Asphalt Constr.	
1,093	1,093	7.06	.....	7.00	.....	13,747.00	25	Casper Helbock, Inc.	9″ foundation
1,166	1,166	8.00	.....	9.00	.....	14,716.00	24	Burnside Const. Co.	Widen & repave 265′, wid. only 135′
NOT COMPLETED 1925									
*980	*980	6.60	.....	8.75	.....	*18,430.00	.....	John Meehan & Son	Widen only
*1,750	*1,750	6.72	.....	7.50	.....	*19,825.00	.....	J. Meehan & Son	
232,070	210,202	.....	.....	.....	.....	2,028,295.00			

TABLE

ASPHALT BLOCK PAVEMENT LAID

Location	From	To	Fund	Former Pavement	Roadway	
					Length	Width
BEGUN 1924 AND						
Park Terrace West.	Isham St.....	215th St.....	C.F.M. 25....	None.....	978	30
BEGUN AND						
177th St.....	Ft. Washington....	Haven.....	N.P.M. 67.....	A.B.....	707	30
				Total.....	1,685	

TABLE

WOOD BLOCK PAVEMENT LAID

Location	From	To	Fund	Former Pavement	Roadway	
					Length	Width
Columbus Circle....	8th Ave.....	Park Circle.....	N.P.M. 48M..	W.B.....	*185	10

*Not included in totals.

TABLE

PAVEMENTS LAID UNDER CONTRACT

Type of Pavement	Contracts in Progress December 31st, 1924		Contracts Completed in 1925	
	Miles	Sq. Yds.	Miles	Sq. Yds.
Sheet asphalt on concrete.....	....	.....	4.63	108,368
Granite block on concrete.....	*0.20	*2,140	9.76	232,070
Wood block on concrete.....	....	.....	0.04	270
Asphalt block on concrete.....	*0.18	*3,253	0.32	5,624
Stone filled S.A. on concrete.....	*3.64	*82,820	2.59	90,449
Total.....	*4.02	*88,213	17.34	436,781

*Included in contracts completed 1925.

III

UNDER CONTRACT DURING 1925

Yardage		Price per Sq. Yd. Pavement only		Price per Cu. Yd. Concrete		Total Cost	Working Days to Complete	Contractor	Notes
Gross Area	City Area	City Area	R. R. Area	City Area	R. R. Area				
COMPLETED 1925									
3,254	3,254	4.29	.....	8.50	.....	21,177.00	28	Burnside Cont'g Co.....	
COMPLETED 1925									
2,370	2,370	4.22	.....	8.00	.....	17,762.00	24	Burnside Cont'g Co.....	
5,624	5,624					38,939.00			

IV

UNDER CONTRACT DURING 1925

Yardage		Price per Sq. Yd. Pavement only		Price per Cu. Yd. Concrete		Total Cost	Working Days to Complete	Contractor	Notes
Gross Area	City Area	City Area	R. R. Area	City Area	R. R. Area				
270	270	4.73	.....	8.00	.....	5,302.00	16	J. Meehan & Son.....	East Side widen only

V

DURING 1925—GROSS AREA

Contracts in Progress December 31st, 1925		Total Sq. Yds.	Total Cost	Cost per Sq. Yd.
Miles	Sq. Yds.			
....	....	108,368	841,092.00	7.76
0.24	2,730	234,800	2,066,550.00	8.80
....	....	270	5,302.00	19.64
....	....	5,624	38,939.00	6.92
....	....	90,449	564,020.00	6.24
0.24	2,730	439,511	3,515,903.00	8.00

TABLE

REGULATING AND GRADING

Location	From	To	Fund	Nature of Work
BEGUN 1924 AND				
Cummins St	Seaman	Broadway	C.F.M. 25	Regulating and grading
Seaman Ave	Dyckman St	Academy		
Riverside Drive	158th St	162nd St	N.P.M. 33D	Grading stairway, etc
188th St	Wadsworth Ave	Wadsworth Ter	C.F.M. 25	Regulate, grade and walls
Wadsworth Ter	188th St	190th St		
196th St	Ellwood	Broadway	C.F.M. 25	Regulate and grade
214th St	Seaman	Indian Road	C.F.M. 25	Regulate and grade
Indian Road	Isham Pk	215th St		
Riverside Dr	900 N. of 165th St.	Dyckman St	N.D.P. 104 C.F.M. 25	Reg., grade, wall and shelter house
BEGUN AND				
187th St	Northern	Chittenden	C.F.M. 25	Regulate and grade
Chittenden	Northern	187th St		
214th St	Seaman	Park Ter. W	C.F.M. 25	Regulate, grade and stairway

TABLE

CONTRACTS ADVERTISED, AWARDED OR

Location	From	To	Kind of Pavement
Attorney St	Stanton	Houston	Granite block
Bennett Ave	184th St	187th St	Sheet asphalt
Bowling Green and Broadway	Morris	Bowling Green	Granite block
Whitehall St	State	Bowling Green	Sheet asphalt
Canal St	Varick	Hudson	Granite block
Thayer St	Sherman	Broadway	
West St	Laight	Watt	Granite block
1st Avenue	In	57th St	
10th Avenue	Delameter Sq	14th St	Granite block
57th Street	1st Ave	2nd Ave	Sheet asphalt
103rd Street	Lexington	Madison	Asphalt block
116th Street	Harlem River	Park Ave	Sheet Asphalt

VI

CONTRACTS DURING 1925

Excavation Cu. Yds.		Rubble Masonry Cu. Yds.		Fill Cu. Yds.	Rubble Concrete Cu. Yds.	Working Days	Total Cost	Contractor
Earth	Rock	Dry	Concrete					
COMPLETED 1925								
7,606	17,528	...	810	4,400	....	128	$ 86,688.00	J. F. Cavaluzzo
1,550	....	...	793	1,516	....	59	33,321.00	M. Del Balso
3,059	822	...	99	4,900	2,033	59	33,251.00	M. Del Balso
1,357	....	...	1,127	3,900	....	50	21,547.00	J. F. Cavaluzzo
303	145	...	....	752	....	41	8,880.00	Louis Di Menna
23,725	43,368	487	1,433	88,489	27,578	143	782,220.00	Chas. D. Beckwith
COMPLETED IN 1925								
1,012	1,165	...	106	6,659	2,512	27	40,422.00	M. Del Balso
183	....	10	59	357	....	59	8,800.00	Dominick Tambone

VII

REGISTERED AND WORK NOT BEGUN IN 1925

Fund	Estimated Area Sq. Yds.	Estimated Cost	Contractor	Remarks
N.P.M. 67....	1,070	$11,672.00	St. George Granite Co.	Registered
C.F.M. 25....	3,370	.....	C. D. Beckwith, Inc....	Awarded
N.P.M. 67...	.....	52,750.00	Uvalde Asp. Pav. Co...	Awarded
N.P.M. 67....	1,970	21,649,00	Casper Helbock, Inc....	.....
C.F.M. 25....	.....	.....	J. V. Timoney.....	Sewer, awarded
N.P.M. 67A....	28,540	118,680.00	J. Meehan and Son....	Registered
C.F.M. 25....	.....	.....	.....	Sewer
N.P.M. 67....	.....	.....	Casper Helbock, Inc....	Awarded
N.P.M. 67B....	7,410	22,731.00	W. J. Fitzgerald.....	Widen only, reg.
N.P.M. 67....	2,680	20,915.00	Regan-Towers.....	Awarded
N.P.M. 67....	15,500	125,961.00	Interboro Asp. Pav. Co.	Widening, Awar.

TABLE

PAVEMENTS LAID UNDER CONTRACT BY

Year	Sheet Asphalt				Bituminous Concrete		Stonefilled Sheet Asphalt		Concrete		Asphalt Block		Wood Block		Old G. B. "A"	
	With Binder		Without Binder													
	Miles	Sq.Yds.	Miles	Sq.yds.	Miles	Sq.Yds.	Miles	Sq.Yds.	Miles	Sq.Yds.	Miles	Sq.Yds.	Miles	Sq.Yds.	Miles	Sq.Yds.
1900	11.05	214,980	.....	.....	.....	.....	.....	.....	.....	.....	2.26	47,444	.....	.....	0.27	4,893
1901	13.15	320,754	.....	.....	.....	.....	.....	.....	.....	.....	3.33	72,140	.....	.....	0.54	20,862
1902	11.06	215,897	.....	.....	.....	.....	.....	.....	.....	.....	0.82	17,165	.....	.....	0.25	4,883
1903	42.67	751,129	.....	.....	.....	.....	.....	.....	.....	.....	2.99	85,348	.....	.....	0.44	9,765
1904	18.02	353,360	.....	.....	.....	.....	.....	.....	.....	.....	2.10	36,702	1.12	21,171	2.21	35,913
1905	14.45	300,650	.....	.....	.....	.....	.....	.....	.....	.....	2.33	63,397	2.36	49,253	1.20	23,230
1906	8.14	197,105	.....	.....	.....	.....	.....	.....	.....	.....	7.83	234,267	4.19	92,809	2.65	54,345
1907	3.95	60,343	.....	.....	.....	.....	.....	.....	.....	.....	6.67	195,657	0.09	1,877	2.94	85,846
1908	5.00	132,539	.....	.....	.....	.....	.....	.....	.....	.....	5.88	148,500	2.00	43,985	5.04	125,865
1909	13.81	242,664	.....	.....	.....	.....	.....	.....	.....	.....	5.57	143,005	2.29	40,569	3.45	64,202
1910	10.43	194,780	.....	.....	.....	.....	.....	.....	.....	.....	5.71	130,358	1.79	51,313	6.84	179,952
1911	18.93	368,685	.....	.....	.....	.....	.....	.....	.....	.....	2.74	54,266	5.85	103,580	7.79	160,374
1912	22.36	436,558	.....	.....	.....	.....	.....	.....	.....	.....	3.37	71,896	5.32	125,148	0.39	6,285
1913	15.39	315,095	.....	.....	.....	.....	.....	.....	.....	.....	0.36	6,760	5.17	121,401	0.33	7,200
1914	8.61	177,002	.....	.....	.....	.....	.....	.....	.....	.....	0.14	3,072	2.90	56,369	0.09	3,155
1915	7.36	132,347	.....	.....	.....	.....	.....	.....	.....	.....	0.05	915	0.31	6,025	.....	.....
1916	13.04	328,171	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.87	18,176	.....	.....
1917	12.05	267,698	0.50	10,493	0.36	6,717	.....	.....	0.52	9,902	.....	.....	1.00	19,705	0.52	12,950
1918	8.35	161,217	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.60	6,801	0.04	1,416
1919	7.10	138,361	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.40	5,829	0.17	2,678
1920	6.50	156,551	.....	.....	.....	.....	.....	.....	.....	.....	0.15	2,640	0.08	1,269	.....	.....
1921	7.08	130,722	.....	.....	0.03	612	.....	.....	.....	.....	0.20	4,456	0.27	5,085	.....	.....
1922	10.52	203,097	.....	.....	.....	.....	.....	.....	.....	.....	0.13	2,634	0.06	1,468	.....	.....
1923	11.10	240,903	.....	.....	.....	.....	0.47	8,609	.....	.....	0.12	2,033	0.25	2,615	.....	.....
1924	8.89	169,855	.....	.....	.....	.....	0.57	10,302	.....	.....	0.11	1,542	.....	656	.....	.....
1925	4.63	108,368	.....	.....	.....	.....	2.59	90,449	.....	.....	0.32	5,624	0.04	270	.....	.....

NOTE.—Old "A" the larger Granite Block 7″ and 8″ deep in general use previous to 1912.

"B" and Standard—The smaller and more uniformly cut Granite Block 5″ deep in use since 1912. During 1914 "B" with ½″ joints was discontinued and what was known for a while as special Improved Granite with ⅜″ joints was adopted for use in Manhattan.

VIII

YEARS FROM 1900 TO DATE—GROSS AREA

Improved G. B. "B"		Granite Block		Recut G. B.		Durax		Belgian Block		Medina Sandstone		Macadam		Total	
Miles	Sq. Yds.	Miles	Sq. Yds.	Miles	Sq. Yds.	Miles	Sq. Yds.	Miles	Sq. Yds.	Miles	Sq. Yds.	Miles	Sq. Yds.	Miles	Sq. Yds.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.77	49,431	16.35	316,748
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.43	19,946	17.45	433,702
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12.13	237,545
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46.10	846,242
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23.45	447,264
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.15	28,080	21.50	464,610
.....	.....	.....	.....	.....	.....	.....	.....	0.05	854	.....	.....	.....	.....	22.86	579,380
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13.65	363,723
.....	.....	.....	.....	.....	.....	.....	.....	0.03	500	.....	.....	.....	.....	17.95	416,206
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25.12	490,445
0.26	3,617	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25.03	560,020
1.79	34,563	0.85	22,900	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37.95	744,368
6.60	145,496	4.37	106,165	.....	.....	.....	.....	.....	.....	0.11	2,650	.....	.....	42.52	894,190
2.65	48,319	7.04	181,586	.....	.....	.....	.....	.....	.....	.....	70	.....	.....	30.94	680,431
0.04	700	4.52	110,255	0.11	3,672	.....	.....	.....	.....	.....	.....	.....	.....	16.41	354,255
.....	.....	2.69	65,832	.....	.....	0.02	641	.....	.....	.....	.....	.....	.....	10.43	205,760
.....	.....	4.32	86,778	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18.23	433,125
.....	.....	4.76	107,164	1.04	17,199	0.48	6,700	.....	.....	.....	.....	.....	.....	21.23	458,448
.....	.....	9.58	120,524	3.44	16,409	0.23	3,395	.....	.....	.....	.....	.....	.....	21.70	309,762
.....	.....	8.81	186,584	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16.48	333,452
.....	.....	3.27	59,523	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.00	219,983
.....	.....	6.53	185,799	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14.11	326,674
.....	.....	1.67	24,154	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12.38	231,353
.....	.....	3.80	160,934	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.74	448,644
.....	.....	6.26	174,221	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.14	356,576
.....	.....	9.76	232,070	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17.34	436,781

During the years 1911, 1912 and 1913 "B" was known as Improved Granite Block.

During the years 1911 and 1912 a so-called "C" block was known as Special Improved Granite Block; in 1913 as Special Granite Block; and in 1914 and since as Granite Block or Standard.

In 1922 0.27 miles, 4,210.3 sq. yds. of 4" block was laid.

In 1924 0.17 miles, 3,080 sq. yds. of 4" block was laid.

TABLE IX

AVERAGE UNIT PRICE FOR CONTRACT WORK—1920 TO DATE, INCLUSIVE

Item	Unit	1920	1921	1922	1923	1924	1925
Sheet asphalt pavement	Square yard	3.63	2.57	1.80	2.76	3.40	3.18
Sheet asphalt in railroad area	Square yard	3.50	3.10	1.78	2.76	3.80	3.28
Sheet asphalt in approaches	Square yard	3.82	2.71	1.80	2.76	3.15	....
Granite block pavement	Square yard	7.88	7.15	6.17	7.28	6.95	6.71
Granite block pavement 4"	Square yard	....	....	6.10	....	6.32	....
Granite block in railroad area	Square yard	7.93	7.51	6.18	7.28	7.30	6.71
Granite block in approaches	Square yard	7.99	6.85	6.60	7.35	7.45	6.71
Old granite block relaid	Square yard	2.94	2.34	1.32	2.34	4.15	2.46
Granite block second hand	Square yard	....	4.38	1.65	4.12	3.75	2.10
Wood block pavement	Square yard	7.85	....	4.79	6.45	5.97	4.73
Wood block in railroad area	Square yard	7.30	....	4.00	6.45	6.00	4.73
Wood block in approaches	Square yard	7.12	5.80	4.29	6.45	5.16	4.73
Old wood block pavement relaid	Square yard	3.70	2.34	1.43	2.99	2.75	3.00
Asphalt block pavement	Square yard	4.80	4.25	3.10	4.00	4.52	4.05
Asphalt block in approaches	Square yard	6.20	4.25	....	4.50	4.50	4.05
Asphalt block in railroad area	Square yard	....	....	....	4.00	....	4.05
Bituminous concrete pavement	Cubic yard	....	....	11.70	13.72	18.00	18.19
Bituminous concrete in approaches	Cubic yard	....	....	....	....	....	18.19
Bituminous concrete in railroad area	Cubic yard	....	....	....	....	....	18.19
Concrete	Cubic yard	14.15	8.82	6.93	9.24	10.61	8.78
Concrete in railroad area	Cubic yard	14.10	8.37	6.93	9.24	8.15	8.78
Concrete in approaches	Cubic yard	....	....	....	....	....	8.78
Curb blue stone, 5"	Linear feet	1.84	1.55	1.48	1.82	1.88	2.05
Curb blue stone corner, 5"	Linear feet	....	....	1.40	....	....	....
Curb granite, 6"	Linear feet	3.30	3.19	3.07	3.33	3.20	3.14
Curb granite corner, 6"	Linear feet	4.42	4.21	3.90	4.40	4.52	4.29
Curb granite, 8"	Linear feet	....	....	....	....	....	3.87
Curb granite corner, 8"	Linear feet	....	....	....	....	....	5.25
Headerstone, 6"	Linear feet	2.31	1.95	1.68	2.40	2.07	2.08
Headerstone temporary	Linear feet	1.63	1.37	.95	1.05	1.36	1.23
Old curb redressed and reset	Linear feet	1.02	.79	.57	0.93	1.02	1.10
Sidewalk, concrete, class "A"	Square feet	.54	.36	.26	0.44	0.38	0.38
Sidewalk, concrete, class "B"	Square feet	....	....	.23	0.35	0.34	0.34
Flag, platform, cut to line	Linear feet	1.46	1.10	.57	0.83	0.85	1.17
Flag, bluestone	Square feet	.57	.41	.28	0.46	0.48	0.38
Flag, bluestone, relaid	Square feet	.26	.14	.09	0.13	0.20	0.14
Brick masonry	Cubic yards	30.96	24.00	19.00	23.00	29.00	28.75
Receiving basins	Each	....	....	200.00	300.00	271.00	286.00
Receiving basins, remodeled	Each	164.00	122.00	83.00	151.00	170.00	168.50
Inlets, standard	Each	154.00	112.00	75.00	125.00	125.00	133.00
Inlets, shallow	Each			55.00	119.00	112.00	128.50
Manhole heads, sewer	Each	43.36	29.75	15.00			....
Manhole heads, water	Each	43.80	29.49	16.00			....
Manhole rings, sewer	Each	9.92	6.63	1.40	0.07	0.07	....
Manhole rings, water	Each	....	....	....	per lb.	per lb.	....
Manhole covers, sewer	Each	11.94	7.52	1.40			....
Manhole covers, water	Each	....	....	....			....
Earth excavation, sewers	Cubic yard	....	....	2.45	....	3.07	....
Earth excavation, sewer appurt	Cubic yard	5.95	3.94	1.98	4.07	3.95	4.17
Rock excavation, sewers	Cubic yard	....	....	10.00	15.00	15.00	....
Rock excavation, sewer appurt	Cubic yard	17.00	14.81	10.50	15.43	17.00	22.41
Vitrified pipe, 12"	Linear feet	3.64	3.25	2.56	3.23	3.10	3.17
Cast iron pipe, 12"	Linear feet	6.29	5.12	3.70	.07 per lb.	4.90	5.90
Hydrants reset H. P.	Each	350.00	....	135.00	200.00	288.00	131.00
Hydrants reset L. P.	Each	....	99.17	75.00	121.00	136.00	112.25
Platform flag relaid	Square feet	....	....	.16	.29	0.20	0.34
Receiving Basins Type H	Each	....	....	250.00	300.00	....	....
Basin heads and dripstones recut	Each	....	....	23.50	50.00	55.00	....
Steel curb	Linear feet	....	....	3.45	3.37	2.95	5.00
Steel curb, corner	Linear feet	....	....	4.00	3.50	3.07	....
Shallow manholes	Each	....	....	55.00	150.00	97.00	....
Excavation	Cubic yard	....	....	2.76	4.54	4.42	3.46
Inlets rebuilt	Each	....	....	75.00	115.00	125.00	....
Type "A" inlet	.....	....	....	....	196.00	175.00	128.50
Manholes	.....	....	....	....	190.00	164.00	....
Sheet asphalt, stone filled	.....	....	....	....	2.56	3.50	3.29

TABLE X

AVERAGE CONTRACT PRICE PER SQ. YD. OF PAVEMENT, INCLUDING 6″ CONCRETE FOUNDATION, 1920 TO DATE

Pavements	1920	1921	1922	1923		1924		1925	
				6″ Base	9″ Base	6″ Base	9″ Base	6″ Base	9″ Base
Bituminous concrete	.....	5.85	....	....	....	....	....	....	....
Sheet asphalt 2″ thick, without binder	.....	....	....	....	....	....	....	....	....
Sheet asphalt, common binder	.....	....	....	....	....	....	....	....	....
Sheet asphalt, close binder	5.99	4.00	2.96	4.30	5.07	5.17	6.05	5.11	5.99
Concrete pavement	.....	....	....	....	....	....	....	....	....
Asphalt block pavement	6.99	6.00	4.26	5.54	6.31	6.29	....	5.42	....
Wood block pavement	10.21	....	5.95	7.99	8.76	7.74	....	6.72	....
Improved granite block pavement	.....	....	....	....	....	....	....	....	....
Granite block pavement	10.24	8.62	7.33	8.82	9.59	8.72	9.60	7.88	8.46
Granite block pavement 4″	.....	....	7.26	....	....	....	....	....	....
Sheet asphalt, stone filled	.....	....	....	4.10	4.87	5.27	6.15	5.37	6.41

TABLE

STATUS OF PAVEMENTS UNDER JURISDICTION OF THE BASED ON COMPLETED

Type of Pavement	Under Guarantee			
	Lengths		Area in Sq. Yds.	
	Feet	Miles	Gross	City
Bituminous concrete on concrete	.....	....	.....	.....
Sheet asphalt on stone	.....	....	.....	.....
Rock asphalt on stone	.....	....	.....	.....
Sheet asphalt on macadam	.....	....	.....	.....
Sheet asphalt on concrete (common binder)	.....	....	.....	.....
Sheet asphalt on concrete (close binder)	289,315	54.77	1,149,784	1,123,587
Sheet asphalt on concrete (no binder)	.....	....	.....	.....
Rock asphalt on concrete	.....	....	.....	.....
Stone filled sheet asphalt	16,674	3.16	100,751	100,751
Concrete	.....	....	.....	.....
Asphalt block on macadam	.....	....	.....	.....
Asphalt block on concrete	4,720	0.87	16,289	15,901
Rock asphalt block on concrete	.....	....	.....	.....
Wood block on concrete	2,832	0.50	10,278	10,447
Old style granite (7″ to 8″ deep) A	.....	....	.....	.....
Recut granite block	.....	....	.....	.....
Granite block (4″ deep)	.....	....	.....	.....
Granite block (5″ deep) B and C	51,540	9.76	232,070	210,202
Belgian block, trap, etc	.....	....	.....	.....
Durax	.....	....	.....	.....
Macadam	.....	....	.....	.....
Totals	365,081	69.06	1,509,172	1,460,888

SUMMARY OF ALL PAVEMENTS

	Totals			
	Lengths		Area in Sq. Yds.	
	Feet	Miles	Gross	City
Bituminous concrete	4,513	0.86	15,938	15,880
Sheet asphalt	1,475,830	279.46	5,868,780	5,661,357
Asphalt block	182,873	34.58	807,051	742,008
Wood block	157,656	29.85	595,871	525,032
Stone	708,076	133.75	3,238,724	2,838,390
Concrete	2,746	0.52	9,902	9,902
Macadam	7,339	1.39	23,902	23,902
Unpaved streets in use	.....	9.39	.....	.....
Totals	2,539,033	489.80	10,560,168	9,816,471

LAID BY R. R. COMPANIES AND NOT INCLUDED IN ABOVE

Wood block	79,122
Sheet asphalt	94,307
Granite block	531,920

XI

BORO PRESIDENT AS OF JANUARY 1ST, 1926, CONTRACTS ONLY

Guarantee Expired				Totals			
Lengths		Area in Sq. Yds.		Lengths		Area in Sq. Yds.	
Feet	Miles	Gross	City	Feet	Miles	Gross	City
4,513	0.86	15,938	15,880	4,513	0.86	15,938	15,880
314,700	59.54	1,193,659	1,110,565	314,700	59.54	1,193,659	1,110,565
3,395	0.64	12,948	12,948	3,395	0.64	12,948	12,948
4,837	0.92	5,585	5,141	4,837	0.92	5,585	5,141
302,321	57.30	1,395,530	1,357,527	302,321	57.30	1,395,530	1,357,527
539,719	102.21	1,983,372	1,923,894	829,034	156.98	3,133,156	3,047,481
2,616	0.50	10,493	10,286	2,616	0.50	10,493	10,286
2,253	0.42	16,658	16.658	2,253	0.42	16,658	16,658
.....	.....	.....	.....	16,674	3.16	100,751	100,751
2,746	0.52	9,902	9,902	2,746	0.52	9,902	9,902
601	0.11	3,574	3,574	601	0.11	3,574	3,574
177,097	33.51	785,128	720,679	181,817	34.38	801,417	736,580
455	0.09	2,060	1,854	455	0.09	2,060	1,854
154,824	29.35	585,593	514,585	157,656	29.85	595,871	525,032
226,465	42.99	871,808	729,300	226,465	42.99	871,808	729,300
5,710	1.08	20,081	20,081	5,710	1.08	20,081	20,081
1,404	0.27	4,212	4,212	1,404	0.27	4,212	4,212
390,544	73.51	1,981,962	1,760,081	442,084	83.27	2,214,032	1,970,210
27,338	5.18	111,592	97,722	27,338	5.18	111,592	97,722
5,075	0.96	16,999	16,865	5,075	0.96	16,999	16,865
7,339	1.39	23,902	23,902	7,339	1.39	23,902	23,902
2,173,952	411.35	9,050,996	8,355,583	2,539,033	480.41	10,560,168	9,816,471

TABLE

TABULATION OF REPAIRS AND REPLACEMENTS PAVEMENTS BASED ON

	Sheet Asphalt and Asphalt Block					
	1920	1921	1922	1923	1924	1925
On January 1st, square yards out of guarantee	5,223,929	5,178,082	5,310,376	5,219,957	5,114,273	5,126,588
There came under city maintenance by expiration of guarantee and transfers of jurisdiction	82,325	262,953	89,992	149,095	128,497	139,805
Making a maximum area of square yards	5,306,254	5,441,035	5,400,368	5,369,052	5,242,770	5,266,393
Replaced by repaving square yards	128,202	131,574	158,831	251,060	137,473	83,633
Portions of areas previously occupied by subway construction and not yet restored	15,788	13,857	13,857	.....	.....	.....
Areas taken by subway construction this year	0	0	0	.....	.....	50,000
Total areas occupied by subway construction and not restored at end of year	15,788	13,857	13,857	.....	.....	50,000
Net area maintained	5,162,264	5,295,604	5,227,680	5,117,992	5,105,297	5,132,760
Amounts of repairs, square yards	387,588	252,159	364,983	451,621	509,092	610,386
Percentage of repairs	7.4%	5%	7.0%	8.8%	9.9%	11.9%
Total cost of repair for year	$725,785	$493,400	$677,196	$755,136	$792,066	$1,028,496
Cost per square yard of repairs	See below	See below	See below	See below	See below	
Cost per square yard to maintain	$0.14	$0.09	$0.13	$0.14	$0.15	$0.20

Area and Cost per Square Yard of Repairs	1920		1921	
Item	Sq. Yds.	Cost Sq. Yd.	Sq. Yds.	Cost Sq. Yd.
Asphalt, ordinary cut out method	301,669	$2.13	200,218	$2.10
Asphalt, burner method (Lutz)	85,919	1.24	35,310	1.55
Wood block	16,702	4.09	11,385	4.17
Granite relaid, bituminous filler	*114,856	1.82	*102,092	1.93
Stone pavement, sand filler	50,557	1.30	34,033	1.36
Granite, repour joints, bituminous filler	6,766	0.47	114,448	0.38
Asphalt (on W. & T. contract)	10,500	4.35	.....	.....
Asphalt, ordinary burner, hand	.....	.....	16,611	1.09
Wood, guarantee W. & T	.....	.....	507	.....
Asphalt, guarantee W. & T	.....	.....	7,042	.....

*This total includes "Stone Pavement—Sand Filler."

XII

AS OF JANUARY 1ST, 1923—MAINTENANCE OF CITY AREAS ONLY

Wood Block						All Stone Block Pavements					
1920	1921	1922	1923	1924	1925	1920	1921	1922	1923	1924	1925
556,732	561,975	541,826	551,982	534,547	534,547	2,550,874	2,606,071	2,613,744	2,734,158	2,700,697	2,700,697
15,356	14,117	17,028	737	4,195	4,065	148,581	89,958	171,936	22,603	176,605	129,864
572,088	576,092	558,854	552,719	539,462	538,612	2,699,455	2,746,024	2,785,680	2,756,761	2,877,302	2,830,561
10,113	34,266	6,872	2,575	20,629	24,027	42,579	132,785	45,596	176,605	98,912	202,373
200	200	200	.....	.....	.....	2,203	1,114	1,114	.....	.....	.....
0	0	0	.....	.....	8,000	500	0	0	.....	.....	.....
200	200	200	.....	.....	8,000	2,703	1,114	1,114	.....	.....	.....
561,775	541,626	551,782	550,144	518,833	506,585	2,654,173	2,612,130	2,738,970	2,580,156	2,778,390	2,628,188
13,629	11,385	15,152	14,574	10,851	1,054	172,180	250,981	177,571	185,572	198,104	285,079
2.4%	2%	2.75%	2.6%	2.1%	0.2%	6.5%	9.5%	6.5%	7.2%	7.1%	10.8%
$55,743	$47,475	$91,583	$57,859	$41,559	$4,912	$277,942	$286,813	$361,570	$265,240	$286,502	$366,363
See below	See below	See below	See below	See below		See below	See below	See below	See below	See below	
$0.095	$0.085	$0.18	$0.15	$0.08	$0.009	$0.11	$0.11	$0.13	$0.10	$0.10	$0.14

1922		1923		1924		1925	
Sq. Yds.	Cost Sq. Yd.	Sq. Yds.	Cost Sq. Yd.	Sq. Yds.	Cost Sq. Yd.	Sq. Yds.	Cost Sq. Yd.
235,258	$2.22	276,093	$2.04	321,562	$1.88	415,820	$1.94
117,188	1.21	172,888	1.11	187,530	1.00	194,566	1.14
15,152	3.87	14,574	3.97	10,851	3.83	1,054	4.66
*108,957	2.44	71,797	2.40	95,729	2.16	124,663	2.18
31,080	1.81	34,076	1.78	28,954	1.79	35,615	1.71
77,421	0.41	79,699	0.44	73,421	0.38	124,801	0.27
.....	.....	.....	.....	.....	.....	.....	.....
12,042	.....	2,640	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....

TABLE XIII

TABULATION OF VARIOUS TYPES OF PAVEMENT UNDER JURISDICTION OF THE PRESIDENT OF THE BOROUGH OF MANHATTAN AS OF JANUARY 1ST, 1926 WITH CHANGES IN GROSS AREAS AND MILEAGES BASED ON CONTRACTS COMPLETED DURING 1925

Type of Pavement	January 1st, 1925		Old Pavement Removed during 1925		Repaving During 1925		Paving During 1925		January 1st, 1926	
	Sq. Yds.	Miles	Sq. Yds.	Miles	Sq. Yds.	Miles	Sq. Yds.	Miles	Sq. Yds.	Miles
Bituminous concrete on concrete	15,938	0.86							15,938	0.86
Sheet asphalt on stone	1,258,557	63.16	64,898	3.62					1,193,659	59.54
Rock asphalt on stone	12,948	0.64							12,948	0.64
Sheet asphalt on macadam	5,585	0.92							5,585	0.92
Sheet asphalt on concrete (common binder)	1,413,567	58.06	18,037	0.76					1,395,530	57.30
Sheet asphalt on concrete (close binder)	3,024,788	152.35			104,722	4.46	3,646	0.17	3,133,156	156.98
Sheet asphalt on concrete (no binder)	10,493	0.50							10,493	0.50
Stone filled sheet asphalt	10,302	0.57			80,659	2.13	9,790	0.46	100,751	3.16
Rock asphalt on concrete	16,658	0.42							16,658	0.42
Concrete	9,902	0.52							9,902	0.52
Asphalt block on macadam	3,574	0.11							3,574	0.11
Asphalt rock on concrete	799,329	34.25	3,536	0.19	2,370	0.13	3,254	0.19	801,417	34.38
Rock asphalt block on concrete	2,060	0.09							2,060	0.09
Wood block on concrete	619,668	30.75	24,067	0.90	270				595,871	29.85
Old style granite (7″ to 8″ deep) A	1,091,728	52.01	219,920	9.02					871,808	42.99
Recut granite block	20,081	1.08							20,081	1.08
Improved granite block (5″ deep) B	565,817	22.00							565,817	22.00
Granite block (4″ deep)	4,212	0.27							4,212	0.27
Granite block (5″ deep) C	1,416,145	51.51			229,623	9.61	2,447	0.15	1,648,215	61.27
Belgian block trap, etc	115,036	5.36	3,444	0.18					111,592	5.18
Medina sandstone on concrete										
Macadam	55,835	3.52	31,933	2.13					23,902	1.39
Durax	16,999	0.96							16,999	0.96
Total	10,489,222	479.91	365,835	16.80	417,644	16.33	19,137	0.97	10,560,168	480.41
Unpaved streets in use		9.29								9.39

NOTE.—For description of (A) (B) (C) Type see Table No. 8.

SIDEWALK DATA

Area, square yards	7,850,556
Area, square feet	70,379,122
Linear miles	917.5

TABLE
SEWER AND SEWER APPURTENANCES

Location	From	To	Code	Total Cost	Commenced	Completed
BEGUN IN 1922						
Canal St. and West St.	.....	.....	C.F.M. 25	387,319.00	Mar. 20	April 2
BEGUN IN 1924						
Cummins	Seaman	Broadway	C.F.M. 25	14,703.00	June 12	May 13
Seaman	Dyckman	Academy				
Thayer	Nagle	Sherman	C.F.M. 25	18,267.00	Nov. 20	April 11
4th St. and East River	.....	.....	C.F.M. 25	22,488.00	Nov. 11	April 21
196th St	Ellwood	Broadway	C.F.M. 25	5,698.00	Oct. 6	May 5
214th St	Seaman	Indian Road	C.F.M. 25	4,177.00	Dec. 16	Mar. 31
Indian Road	Isham Park	215th St				
BEGUN AND						
Amsterdam	179th St	181st St				
181st St	Amsterdam	Laurel Hill Terr	C.F.M. 25	50,871.00	Mar. 12	Nov. 11
Laurel Hill Terr	181st St	184th St				
219th St	Broadway	9th Ave	C.F.M. 25	3,060.00	Jan. 16	Feb. 7
193rd St	St. Nicholas	Audubon	C.P.R. 236	.....	May 11	July 23
9th St	East of Ave. D	.....	C.P.R. 228	.....	Feb. 19	Feb. 26
Sutton Pl	N. E. Cor. 58th St.	.....	C.P.R. 232	.....	April 27	July 1
Payson Ave	114′ N. of Beak St.	.....	C.P.R. 231	.....	April 6	Sept. 1
214th St	Park Terr. W	Seaman Ave	C.P.R. 208	.....	Sept. 12	Oct. 25
Academy St	E.&W. of Seaman Ave.	.....	C.P.R. 227	.....	Jan. 8	Feb. 13
			Totals	506,583.00		
BEGUN AND NOT						
Nassau St	John St	Fulton St	.....	.....	.....	.....
WORK DONE UNDER OPEN						
Lenox Ave	S. W. Cor. 147th St.	.....	.....	.....	.....	.....
Madison Ave	S. E. Cor. 34th St.	.....	.....	.....	.....	.....
Lenox Ave	N. W. Cor. 147th St.	.....	.....	.....	.....	.....
			Totals			
SEWER APPURTENANCES BUILT						
Riverside Dr	165th St	Broadway	.....	.....	.....	.....
Lispenard St	B'way	W. B'way	.....	.....	.....	.....
93rd St	Ave. A	1st Ave	.....	.....	.....	.....
16th St	7th Ave	9th Ave	.....	.....	.....	.....
3rd Ave	125th St	130th St	.....	.....	.....	.....
8th St	Lewis	Ave. D	.....	.....	.....	.....
King St	Varick	West	.....	.....	.....	.....

XIV

UNDER CONSTRUCTION DURING 1925

Storm	Sanitary	Combined	Sewer Built							Appurtenances					Notes
			Pipe		Brick	Concrete		Wood		Culvert	Basins		Inlets		
			Vitrified	C. I.		Reinforced	Precast	Box	Barrel		Altered	New	Altered	New	
AND COMPLETED 1925															
.....	.....	220	.....	.....	.....	.....	220	.....	.....	273	.....	3	.....	.....	Treatment Plant & Pumping Sta.
AND COMPLETED 1925															
.....	.....	918	918	.....	.....	.....	.....	.....	.....	130	.....	4	.....	1	New
.....	.....	664	.....	.....	664	.....	.....	.....	.....	60	.....	2	.....	1	New
.....	.....	455	.....	.....	455	.....	.....	.....	.....	136	.....	4	.....	.....	.....
.....	.....	456	456	.....	.....	.....	.....	.....	.....	81	.....	2	.....	1	New
.....	.....	476	476	.....	.....	.....	.....	.....	.....	33	.....	2	.....	.....	New
COMPLETED 1925															
.....	.....	1,425	.....	.....	.....	1,425	.....	.....	.....	148	.....	8	.....	2	New
.....	.....	414	414	.....	.....	.....	.....	.....	.....	12	.....	1	.....	.....	New
.....	.....	194	194	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	New—Private
.....	.....	55	55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	New—Private
.....	.....	45	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	New—Private
.....	.....	56	56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	New—Private
.....	.....	327	327	.....	.....	.....	.....	.....	.....	74	.....	2	.....	3	New—Private
.....	.....	36	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	New—Private
		5,741	2,977		1,119	1,425	220			947		28		8	
COMPLETED 1925															
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
MARKET ORDERS DURING 1925															
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18	.....	1	.....	.....	.....
										49		3			
UNDER HIGHWAY CONTRACTS 1925															
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	407	3	1	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23	.....	1	1	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	29	.....	2	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	65	4	.....	.....	4	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	322	1	6	.....	11	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	1	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	57	3	.....	.....	4	.....

TABLE

SEWER AND SEWER APPURTENANCES

Location	From	To	Code	Total Cost	Commenced	Completed
West 4th St.	Broadway	McDougal				
Wash. Sq. So.						
Hudson St.	Christopher	Bank				
177th St.	Ft. Washington	Haven				
Riverside Dr.	165th St.	900′ N.				
7th Ave.	53rd St.	59th St.				
59th St.	1st Ave.	2nd Ave.				
1st Ave.	58th St.	Queens Bdge.				
Peck Slip	Pearl	South				
165th St.	Edgecombe	Amsterdam				
166th St.	Amsterdam	St. Nicholas				
170th St.	Amsterdam	St. Nicholas				
5th Ave.	9th St.	13th St.				
1st Ave.	14th St.	23rd St.				
Amsterdam Ave.	145th St.	155th St.				
Little W. 12th St.	9th Ave.	10th Ave.				
Riverside Dr.	900′ N. 165th St.	Dyckman St.				
Columbus Circle	E. side 8th Ave.	Park Drive				
5th Ave.	58th St.	60th St.				
3rd St.	Broadway	W. B'way				
1st Ave.	Houston St	14th St.				
3rd Ave.	79th St.	96th St.				
124th St.	Lenox Ave.	7th Ave.				
Park Ave.	E. side 32nd St.	133rd St.				
2nd Ave.	57th St.	58th St.				
61st St.	Park Ave.	5th Ave.				
55th St.	5th Ave.	6th Ave.				
47th St.	5th Ave.	6th Ave.				
14th St.	Ave. B	Ave. D				
2nd Ave.	45th St.	48th St.				
Isham St.	Cooper	Seaman				
West End Ave.	69th St.	72nd St.				
Dover St.	South	Pearl				
Frankfort St.	Pearl	Gold				
41st St.	Park Ave.	5th Ave.				
139th St.	5th Ave.	Harlem River				
Broadway	Columbus Cir.	79th St.				
11th Ave.	27th St.	62nd St.				
12th St.	Greenwich	West				
Canal St.	Forsythe	E. Broadway				
Mangin St.	Grand St.	Stanton St.				
11th Ave.	12th St.	22nd St.				
41st St.	Lexington	Park				
Lexington Ave.	53rd St.	60th St.				
Lexington Ave.	60th St.	62nd St.				
94th St.	1st Ave.	East River				
188th St.	Wadsworth Ave.	Wadsworth Terr.				
Wadsworth Terr.	188th St.	190th St.				
			Totals			
			Grand Totals			

XIV—Continued

UNDER CONSTRUCTION DURING 1925

Storm	Sanitary	Combined	Sewer Built							Appurtenances					Notes
			Pipe		Brick	Concrete		Wood		Culvert	Basins		Inlets		
			Vitrified	C. I.		Reinforced	Precast	Box	Barrel		Altered	New	Altered	New	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	174	4	6	.....	12	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	270	11	.....	.....	10	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22	3	.....	.....	2	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	139	.....	4	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	5	.....	.....	1	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28	1	.....	.....	2	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48	.....	2	.....	3	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37	4	.....	.....	3	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	178	7	.....	.....	5	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	338	13	.....	.....	10	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	52	4	.....	.....	3	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	244	.....	5	.....	3	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28	3	.....	.....	1	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	62	8	.....	.....	1	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	301	21	.....	.....	19	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	330	17	.....	.....	14	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30	.....	.....	.....	1	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	.....	.....	1	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	76	2	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18	2	.....	.....	2	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30	2	.....	.....	2	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	282	10	.....	.....	8	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	2	.....	.....	1	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	167	5	.....	3	1	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21	6	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	52	.....	.....	3	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	115	2	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	250	5	.....	.....	10	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	728	57	.....	.....	46	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22	4	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	8	.....	.....	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39	3	.....	.....	2	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	277	16	.....	.....	9	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26	.....	.....	2	.....	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	234	11	.....	2	13	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	4	
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31	.....	.....	.....	.....	
.....	.....	520	520	.....	.....	.....	.....	.....	.....	199	.....	6	.....	2	
		520	520							5,808	256	33	12	211	
		6,261	3,497		1,119	1,425	220			6,804	256	64	12	219	

TABLE XV

LINEAR FEET OF SEWER REMOVED DURING 1925

Location	From	To	Brick	Concrete	Barrel		Pipe		Culvert Pipe
					Bar.	Box	Vitrified	C. I.	
4th St	Foot of East River		455.0						
Total			455.0						

TABLE XVI

NET LINEAR FEET OF SEWER AND APPURTENANCES BUILT DURING 1925

	Sewers						Appurtenances						Notes
	Pipe	Brick	Concrete		Wood		Culvert		Basins		Inlets		
			Reinf.	Prec't	Box	Barrel	Vitrif.	C. I.	Alt.	New	Alt.	New	
Sewers built under contract	2,977	1,119	1,425	220			947			28		8	
Sewer work under O.M.O.							49			3			
Sewer work under highways	520						5,808		256	33	12	211	
Totals	3,497	1,119	1,425	220			6,804		256	64	12	219	
Sewers and appurtenances removed		455											
Net Total	3,497	664	1,425	220			6,804		256	64	12	219	

TABLE 17

TABULATION OF SEWER APPURTENANCES, SHOWING THE INCREASE IN THE LENGTH OF SEWERS AND NUMBER OF APPURTENANCES FROM 1870 TO DATE INCLUSIVE

Date	Sewers Lin. Ft.	Basins No.	Sluice Basins No.	Culvert Lin. Ft.	Drains Lin. Ft.	Sewers Incl. Culvert Lin. Ft.	Total Basins	Total Sluice Basins	Total Length Sewers in Miles
Apr. 10, 1870	.....	.....	.....	.....	1,500	1,377,038	3,372	.....	260.80
Apr. 11, 1871	79,568	231	.....	3,680	.....	1,460,286	3,603	.....	276.57
Apr. 10, 1872	64,153	184	.....	1,975	5,700	1,526,414	3,787	.....	289.09
Apr. 30, 1873	33,522	67	.....	2,472	22,601	1,562,408	3,854	.....	295.91
Dec. 31, 1873	54,117	83	.....	2,519	10,642	1,619,044	3,937	.....	306.63
Dec. 31, 1874	69,740	161	.....	3,805	16,014	1,692,589	4,098	.....	320.56
Dec. 31, 1875	48,444	129	.....	3,271	15,206	1,744,304	4,227	.....	330.38
Dec. 31, 1876	22,629	88	.....	3,610	.....	1,770,543	4,315	.....	335.33
Dec. 31, 1877	28,587	57	.....	1,810	.....	1,800,940	4,372	.....	341.08
Dec. 31, 1878	33,506	92	.....	2,040	.....	1,836,486	4,464	.....	347.81
Dec. 31, 1879	11,869	35	.....	854	.....	1,849,209	4,499	.....	350.22
Dec. 31, 1880	25,449	49	.....	1,472	.....	1,876,130	4,548	.....	355.32
Dec. 31, 1881	33,132	21	.....	487	.....	1,909,749	4,569	.....	361.70
Dec. 31, 1882	40,443	98	.....	2,578	.....	1,952,770	4,667	.....	369.65
Dec. 31, 1883	33,454	130	.....	2,833	.....	1,989,057	4,797	.....	376.72
Dec. 31, 1884	64,881	206	.....	5,256	.....	2,059,194	5,003	.....	390.00
Dec. 31, 1885	18,663	28	.....	603	.....	2,078,460	5,031	.....	393.65
Dec. 31, 1886	19,682	42	.....	798	.....	2,098,940	5,073	.....	397.53
Dec. 31, 1887	36,516	43	.....	1,102	.....	2,136,558	5,116	.....	404.65
Dec. 31, 1888	39,594	81	.....	1,981	.....	2,178,133	5,197	.....	412.53
Dec. 31, 1889	31,100	.....	.....	1,274	.....	2,210,507	5,197	.....	418.66
Dec. 31, 1890	21,917	39	.....	.....	.....	2,232,477	5,236	.....	422.82
Dec. 31, 1891	33,803	69	.....	2,277	.....	2,268,557	5,305	.....	429.65
Dec. 31, 1892	30,905	62	.....	1,612	.....	2,301,074	5,367	.....	435.81
Dec. 31, 1893	38,774	56	.....	2,184	.....	2,342,032	5,423	.....	443.57
Dec. 31, 1894	40,192	49	.....	1,140	.....	2,383,364	5,472	.....	451.40
Dec. 31, 1895	31,242	68	.....	11,448	.....	2,416,054	5,540	.....	457.58
Dec. 31, 1896	19,580	66	.....	1,450	.....	2,437,084	5,606	.....	461.56
Dec. 31, 1897	54,793	128	.....	2,658	.....	2,494,535	5,734	.....	472.45
Dec. 31, 1898	6,371	20	.....	441	.....	2,501,347	5,754	.....	473.75
Dec. 31, 1899	24,808	106	.....	1,849	.....	2,528,004	5,860	.....	478.78
Dec. 31, 1900	29,193	102	.....	1,936	.....	2,559,133	5,962	.....	484.68
Dec. 31, 1901	12,491	25	.....	809	.....	2,572,433	5,987	.....	487.20
Dec. 31, 1902	17,850	63	.....	1,411	.....	2,591,694	6,050	.....	490.85
Dec. 31, 1903	22,647	59	.....	1,049	.....	2,615,390	6,109	.....	495.33
Dec. 31, 1904	15,274	58	.....	552	.....	2,631,216	6,167	.....	498.32
Dec. 31, 1905	21,023	35	.....	543	.....	2,652,782	6,202	.....	502.42
Dec. 31, 1906	12,573	22	.....	625	.....	2,665,980	6,224	.....	504.92
Dec. 31, 1907	20,174	68	.....	1,296	.....	2,687,450	6,292	.....	509.00
Dec. 31, 1908	16,634	63	.....	1,235	.....	2,705,319	6,355	.....	512.37
Dec. 31, 1909	8,818	14	.....	326	.....	2,714,463	6,369	.....	514.10
Dec. 31, 1910	5,154	20	.....	357	.....	2,719,974	6,389	.....	515.14
Dec. 31, 1911	5,975	21	.....	434	.....	2,726,383	6,410	.....	516.36
Dec. 31, 1912	7,523	22	.....	369	.....	2,734,275	6,432	.....	517.85
Dec. 31, 1913	7,935	42	.....	1,357	.....	2,743,567	6,474	.....	519.61
Dec. 31, 1914	990	59	13	1,915	.....	2,746,472	6,533	13	520.16
Dec. 31, 1915	8,069	191	220	8,477	.....	2,763,018	6,724	233	523.29
Dec. 31, 1916	23,064	200	563	16,976	.....	2,786,082	6,924	796	527.66
Dec. 31, 1917	5,476	183	504	11,161	.....	2,802,719	7,107	1,300	530.81
Dec. 31, 1918	2,720	85	160	4,430	.....	2,809,869	7,192	1,460	532.21
Dec. 31, 1919	7,364	29	225	4,317	.....	2,821,500	7,221	1,685	534.37
Dec. 31, 1920	8,302	10	113	1,765	.....	2,831,567	7,231	1,798	536.28
Dec. 31, 1921	3,496	33	236	4,712	.....	2,839,775	7,265	2,034	537.83
Dec. 31, 1922	3,381	29	175	3,440	.....	2,846,596	7,293	2,209	539.13
Dec. 31, 1923	10,531	75	211	7,925	.....	2,865,052	7,368	2,420	542.63
Dec. 31, 1924	4,836	34	273	7,676	.....	2,877,564	7,402	2,693	544.99
Dec. 31, 1925	5,806	64	219	6,804	.....	2,890,174	7,466	2,912	547.40

REPORT OF DIVISION OF ENCROACHMENTS AND INCUMBRANCES

The annual report of the Division of Encroachments and Incumbrances for the year 1925 is respectfully submitted herewith:

Encroachments and Widening

Pursuant to resolutions of the Board of Estimate and Apportionment notices were served and sent to owners of property in connection with the removal of encroachments and widening of roadways on the following thoroughfares:

*Fifth Avenue, Washington Sq. North to 13th Street changed to 9th to 13th Streets.
Lexington Avenue, 60th to 62nd Streets.
*West End Avenue, 69th to 72nd Streets.
Second Avenue, 57th to 61st Streets.
Fourth Avenue, 9th to 12th; 17th to 32nd Streets.
*32nd Street, 6th to 7th Avenues.
34th Street, Lexington to 3rd Avenues.
41st Street, 5th to Park Avenues.
47th Street, 5th to 6th Avenues.
55th Street, 5th to 6th Avenues
57th Street, 1st to 2nd Avenues.
*61st Street, Park to 5th Avenue.
116th Street, Park Avenue to Harlem River.
*Widening only.

These notices were followed to a successful completion so that the necessary widening could be accomplished except on the following streets where work was postponed until 1926:

Fourth Avenue, 9th to 12th; 17th to 32nd Streets.
57th Street, 1st to 2nd Avenues.
116th Street, Park Avenue to Harlem River.

Incumbrances

Complaints from various sources were received and notices served and conditions remedied.

An unusual number of dispossesses were reported which required the immediate attention of the incumbrance truck in order to avoid congestion of sidewalks, protection of property, etc. These cases naturally interfere with the working schedule of truck on other matters owing to time consumed in visiting the locations, loading and unloading the goods. Although in some instances no removals are made time is lost in going to the premises.

Auction Sales

Sales of unredeemed and condemned articles were held at the Corporation Yards on January 8th, May 21st and September 25th, 1925.

Street Signs

Contracts were awarded for 475 new frames, 2,169 enameled street signs, 350 school and hospital signs, 12 railroad warning signs, temporary signs where names of streets have been changed and for necessary equipment and material.

With the completion of the above contracts this borough will be well equipped with street signs, and with the 1926 appropriation will be better equipped by replacements and installation of new signs and frames where necessary.

House Numbers

Numbers were assigned to new buildings for the filing of plans and changes and readjustments made as required.

Notices were also served upon owners, agents and others where the premises were unnumbered or did not comply with the Ordinance. Only a very small percentage of these were not complied with and these cases were referred to the Law Department.

Avenue "A," 54th to 59th Streets, was changed to Sutton Place South and renumbered.

Inspections, Notices and Seizures

17,864 inspections and reinspections were made.
458 locations for stands were reported on for Department of Licenses and Department of Markets.
7,010 notices were served or mailed.
1,298 locations visited by incumbrance truck in addition to patrol.
475 seizures or removals made.
99 seizures redeemed by owners upon paying cost of removal.
178 permits issued for erection of temporary canopy awnings.
122 violations referred to the Bureau of Penalties of the Law Department.
2,730 street signs installed.
47 school signs installed.
50 hospital signs installed.
82 traffic signs installed.
430 paving signs installed.
3 warning (railroad) signs installed.
17,337 signs readjusted, repaired, painted, etc.

EDWARD BRADY,
In Charge, Division of Encroachments and Incumbrances.

ANNUAL REPORT 1925

BUREAU OF PUBLIC BUILDINGS AND OFFICES

GENERAL INFORMATION—CHARTER REQUIREMENTS

The Charter of Greater New York under Section 383 states that the Borough President shall have cognizance and control—

Of the construction, repairs, cleaning and maintenance of public buildings, including markets, except schoolhouses, alms-houses, penitentiaries and fire and police station houses, and other buildings whose care and custody are otherwise provided for in the act.

Of the care and cleaning of all offices, leased or occupied for public use.

Of the location, establishment, care, erection and maintenance of the public baths, public urinals, and public comfort stations.

SCOPE OF WORK

Buildings, baths, comfort stations and places under jurisdiction of the President of the Borough of Manhattan, which receive the attention of the Bureau as to cleaning and operation and in all of which repairs are made as necessary, are listed in the following directory.

DIRECTORY OF BUILDINGS, BATHS, COMFORT STATIONS, PLANTS AND CORPORATION YARDS

City Owned Court Houses and Miscellaneous Buildings

1. Municipal Building.
2. City Hall.
3. Hall of Records.
4. Criminal Courts.
5. City Court.
6. County Court.
7. New County Court (in course of construction under jurisdiction of Court House Board).
8. Department of Health.
9. 45 Lafayette Street and 117-119 Worth Street.
10. 49 Lafayette Street—Public Buildings and Transportation Commission.
11. 5 Duane Street—Public Administrator Storeroom.
12. 57 Centre Street—License Bureau.
13. 121-123 Worth Street—Public Building—Storehouse.
14. 125-127 Worth Street—Public Building—City Record.
15. 129-135 Worth Street—Public Building—Employment Bureau.
16. 145 Worth Street—Public Building—Child Welfare.
17. Excelsior Building So.—131-137 Centre Street and 110-112 White Street.

18. 146 Grand Street—1st Dist. Municipal Court.
19. 264-266 Madison Street Court—2nd Dist. Municipal Court.
20. 300 Mulberry Street—301 Mott Street—City Mag. Traffic Court.
21. 2nd Street and 2nd Avenue—3rd District Mag. Court.
22. Jefferson Market Court—2nd District Mag. Court.
23. 128 West 17th Street—Veteran Fireman Assn., 73rd Volunteers.
24. Children's Court—137 East 22nd Street.
25. 314 West 54th Street—7th District Mag. Court.
26. 153 East 57th Street—Domestic Relations Court—10th Dist. Mag.
27. Harlem Court—East 121st Street—5th Dist. Mag. Court.

City Leased Public Offices or Quarters

28. 51 Chambers Street—Judges' Chambers.
29. 110 White Street—1st Dist. Mag. Courts (Part of Excelsior Bldg.).
30. 207 East 32nd Street—4th District Municipal Court.
31. 59th Street and Madison Avenue—9th Dist. Municipal Court.
32. 155 East 88th Street—6th Dist. Municipal Court.
33. 96th Street and Broadway—5th Dist. Municipal Court.
34. 360 West 125th Street—7th Dist. Municipal Court.
35. 1128 St. Nicholas Avenue—12th District Mag. Court.

City Owned Free Public Baths

36. 133 Allen Street—Showers.
37. 83 Carmine Street—Showers.
38. 100 Cherry Street—Showers.
39. 247 Madison Street—Showers.
40. 5 Rutgers Place—Showers and Pool.
41. 326 Rivington Street—Showers and Pool.
42. 538 East 11th Street—Showers.
43. Corner 23rd Street and Avenue A—Showers and Pool.
44. 407 West 28th Street—Showers and Pool.
45. 347 West 41st Street—Showers.
46. 342 East 54th Street—Showers and Pool.
47. 232 West 60th Street—Showers and Pool.
48. 523 East 76th Street—Showers.
49. 243 East 109th Street—Showers.
50. 35 West 134th Street—Showers.

City Owned Floating Baths and Leased Storage Basin

51. Leased winter quarters—Rae's Basin, North Beach, L. I.
52. Floating Bath No. 1—Battery Sea Wall (for men).
53. " " No. 2— " " " (for women).
54. " " No. 3—Ft. of Jackson St., E. R., for both sexes, alternate days.
55. " " No. 4—Ft. of E. 10th St., E. R., for both sexes, alternate days.
56. " " No. 5—Ft. of E. 90th St., E. R., for both sexes, alternate days.
57. " " No. 6—Ft. of E. 120th St., E. R., for both sexes, alternate days.
58. " " No. 7—Ft. of W. 99th St., E. R., for both sexes, alternate days.
59. " " No. 8—Ft. of W. 132nd St., E. R., for both sexes, alternate days

City Owned Free Public Comfort Stations

60. Battery Park—Greenwich and State Streets.
61. Jeanette Park—Coenties Slip.
62. Hanover Square—Pearl Street and Old Slip.
63. Mail Street, near Broadway, City Hall Park.
64. Chatham Square, Bowery and Oliver Street.
65. Sheriff and Delancey Streets—Under bridge approaches.
66. Abingdon Square, 8th Avenue and Hudson Street.
67. Greeley Square, 33rd Street and Broadway.
68. Long Acre Square, 47th Street and Broadway.
69. Queensboro Bridge, 59th Street and 2nd Avenue.
70. 61st Street and Central Park West, in Central Park.
71. Park Avenue and 125th Street, opposite N. Y. C. R. R. Station.
72. Willis Avenue Bridge, First Avenue and 125th Street.
73. Third Avenue and 129th Street, under Elevated R. R. Station.
74. McNally Plaza, West 181st Street (Washington Bridge), under construction.
75. Inspiration Point and Riverside Drive (Proposed).

City Owned Plants and Corporation Yards (Bureau of Engineering)

76. Corporation Yard, Madison and Monroe Streets.
77. Corporation Yard, Rivington and Tompkins Streets.
78. Sewage Screening Plant, Ft. of Canal Street.
79. Corporation Yard, 56th Street and 11th Avenue.
80. Asphalt Plant, 90th Street and Avenue A.
81. Sewage Screening Plant, Ft. of Dyckman Street and Hudson River.
82. Corporation Yard, 165th Street and Riverside Drive.

The completion of two new Free Public Baths and two new Comfort Stations, started last year, was accomplished and baths and stations opened for use by the public.

These new baths and stations are:

A Bath of new construction at 35 West 134th Street.

A building altered and converted to a Bath at 247 Madison Street.

A Comfort Station erected at Jeanette Park (Coenties Slip).

A Comfort Station erected at West 61st Street and Central Park West.

A Comfort Station in course of construction recently started at McNally Plaza.

Six additional comfort stations have been asked for, one of which is authorized.

WELFARE

The departmental welfare work has been carried on in the usual manner. The annual outing which took place at Verplanck Point on the Hudson and the Theatre Party at the Knickerbocker were liberally participated in; as was also the large amount of loans given and donations made from fund.

A great deal of good is accomplished in making these loans without any interest or charge whatever. The only question involved in giving them is the necessity of the employees receiving them; the cause of the necessity, or whether it is a deserving case does not receive as much consideration as does the necessity itself.

These loans are paid back in regular weekly or semi-monthly installments. In some special cases, these payments have been deferred and extend over the original time allowance, upon requests being made by the debtors.

In cases where the necessity was great and the ability to repay small, donations have been made. Other donations were the usual Xmas baskets to families of present or former employees, whose circumstances prevented their enjoying a Xmas dinner of the sort without our help. These baskets consisted of sensible staple articles of food and a few delicacies of the season and candy for children.

CITY OWNED FREE PUBLIC BATHS

(Thefts)

An occurrence worthy of notice took place in the apprehension at the Carmine Street Bath, and later, arrest, of a character who had for several years past menaced the baths by thefts from the clothing (and sometimes the clothing also) of patrons of the baths. The stealing is generally accomplished with the aid of one or more confederates, who assist by watching for interference and who also distract the attention of bathers from their clothing or property while the theft is carried out. Since his arrest and conviction, the reports of thefts have materially decreased.

BUILDINGS, BATHS AND COMFORT STATIONS

The more important or more extensive jobs done at the various places will be noted in the following pages under their respective headings of buildings, etc.

This work, however, does not require as much time and effort as the multiplicity of small jobs and routine work, the items of which are individually of too small importance to enumerate.

Routine care and cleaning jobs, such as cleaning boilers, boiler and engine rooms, tanks, flues, smoke stacks, etc., drains and obstructions in various parts of buildings and plants will be omitted in lists and tabulations, as it is understood such work is carried on and must be done in order to operate the plants and buildings in every case.

MUNICIPAL BUILDING

Park Row, Centre Street, Duane Street

Some of the more important items of work done during the year are here enumerated.

A number of partitions were removed involving repairs to floors, walls, and ceilings and other partitions and railings were erected in other offices.

Three hundred and seventy-five sq. ft. of new C 1 plates for vault lights in sidewalk were installed in place of the old concrete ones.

Improvement of ceiling fixture lighting has been carried on by changes and lengthening of fixtures.

Oil burners were installed in furnaces of 3 of the 6 boilers at a contract price of $26,681.

CRIMINAL COURTS BUILDING

(Centre to Lafayette Streets and Franklin to White Streets)

This is the building to which the celebrated "Bridge of Sighs" connects from the Tombs Prison. It is now also connected by a bridge to the Excelsior Building across White Street for convenient passage to and from the District Attorney's offices and the court rooms.

The offices of the District Attorney are in course of removal from this building to the Excelsior Building and the 1st District Magistrates Court, which was formerly in the Excelsior Building (with a separate and independent entrance known as 110 White Street), was removed to the Criminal Courts Building to the space previously forming the Library of the District Attorney's offices.

NEW COUNTY COURT BUILDING

Worth, Pearl, Centre and Baxter Streets

This building is still under the jurisdiction of the Court House Committee. This bureau has, however, co-operated with the Committee by making inspection of marble materials for building.

It is about 60% completed. Rearrangement and assignment of space is now receiving attention; plans for grounds around building and streets in formation.

DEPARTMENT OF HEALTH BUILDING

505 Pearl Street

This old building, once known as the Hallenbeck Building, is provided with an old steam and elevator plant requiring constant repairs and extra attention.

45 LAFAYETTE STREET AND 117-119 WORTH STREET

This building was taken over from its leased occupants and assigned to use of the Board of Transportation Sept. 1, 1925; the care and maintenance were assigned to the President, Borough of Manhattan.

The Transportation Board undertook to take care of cost of alterations for its use with the exception of the steam plant alterations necessary which were done by this Bureau.

The Building is still undergoing alterations at end of year, but is heated from the steam plant of the building 49 Lafayette Street, to which it is also connected by doorways through walls between.

EXCELSIOR BUILDING

110-112 White Street and 131-137 Centre Street

This building is the southerly one of the north and south Excelsior Buildings.

It was taken over by the City by title vested July 14, 1924. The portion No. 110 White Street was owned and constructed on adjoining city property and formed an entrance and stairhall to 2nd story, where it connected with a corridor to the 1st District Magistrates Court in this building, which portion was leased from the then owners. All the old tenants' leases were vacated and building emptied of all its occupants, the Magistrates Court going into the space in Criminal Courts building formerly used as District Attorney's library.

All the old partitions were removed from building and new rearrangement made (but not yet entirely completed) for use as offices for the District Attorney's force and library.

It has been altered also by connecting a bridge across White Street from third story of Criminal Courts Building to this building.

300 MULBERRY STREET AND 301 MOTT STREET

Traffic Court, Chief Magistrate's Offices, Municipal Courts

The additional court room for Traffic Court was completed early in the year.

314 WEST 54TH STREET

7th District Magistrates' Court, Municipal Court, and Night Court—Highways Division

Painted two Municipal Court rooms, main hallway, clerks' rooms, janitor's rooms, Highway office and the toilet rooms.

Erected a terra cotta block plastic partition between prison pen passageway and prison stairs with two fireproof doors, hardware and door closers.

153 EAST 57TH STREET

10th District Magistrates' Court—Domestic Relations Court and Prison

As the front entrance stairs were an encroachment upon the highway, the encroachment was removed involving rearrangement of front entrance which was done by contract.

City Leased Public Offices and Court Spaces

51 CHAMBERS STREET

Judges' Chambers in Emigrant Bank Building

Installed 2,000 sq. ft. of shelving in Judges' Library annex on top floor.

110 WHITE STREET

First District Magistrates Court

This Court, to which entrance was by a separate stairway extending from structure No. 110, terminated its tenancy at the above address in December, 1925, and was housed in the Criminal Courts Building.

No. 110 will, for the future, lose its identity as a separate unit and become part of and one of the entrances to No. 112 White Street and 131-137 Centre Street, known as the Excelsior Building South.

83 CARMINE STREET—SHOWER BATH

This bath was altered by the removal of the easterly wall which had been shored up for some time after the subway extension was built. A new wing was erected at the easterly side and new showers installed increasing the capacity of the bath considerably, and completed in March, 1925. A movement to install a pool in connection with this bath at the west side in the adjoining park was started this year with an appropriation of $85,000 for the purpose. Plans have been prepared and negotiations made with Park Department as to space and architectural features of structure. Meetings have been held by neighborhood associations endorsing and favoring its construction.

All shower wells, toilets, shower doors, iron work of stair halls and roof were painted and dado of stairway was marbleized and hand rails refinished.

New sections of wooden partitions were erected around engine room, office and storeroom.

New partitions of terra-cotta were erected between engine and boiler room.

Twenty-two new shower room doors were installed and ten others repaired; new latches were provided also.

CHERRY AND OLIVER STREETS—SHOWER BATH

(100 Cherry Street)

The work of repairing and preserving stonework of exterior was completed.

New hot and cold water mains and circulating lines throughout bath were installed and covered with insulation and provided with quick acting valves to control same.

All mixing valves were removed and individual control valves provided for each hot and cold shower.

247 MADISON STREET—SHOWER BATH—GROUP BATHING

This building is designed for use in group bathing. It was opened for bathing about April 1st, 1925.

The open or group bathing is arranged for by locating the showers along three walls of each bathing space without partitions between them. Each shower is controlled by separate hot and cold water valves operated by bathers. There are quick closing control valves by which the attendant on duty may close off a section for tripping purposes or repairs.

The one person lockers are located in the central space and arranged in aisles about 6 ft. away from the showers. There are benches upon which the bathers sit for dressing and undressing.

EAST 23RD STREET, CORNER OF AVENUE A

Showers and Pool Bath

This bath is preferred over the others by many bathers on account of its proximity to the elevated railroad and mostly because of the light and roomy space in which the pool is located, entirely above ground and getting sunlight from a high skylight extending entirely over pool.

The Ozone apparatus for sterilization of water was removed together with appurtenances, and replaced with a Wallace & Tiernan Chlorinator for that purpose. The latter is efficient and is operated at less expense of care and maintenance than the former and takes up less room, doing away with the ozone receiver or mixing tower on pool floor.

232 WEST 60TH STREET—SHOWER AND POOL BATH

The pool at this bath, on account of its size, is the most popular for holding contests or swimming meets in.

A very interesting meet was held there by the crew of the S.S. "Lapland" vs. the teams championed by the swimming instructors of the public baths.

Diving exhibitions and water "stunts" were also included.

523 EAST 76TH STREET—SHOWER BATH

New supply lines to showers were installed throughout.

All mixing valves were removed and replaced by individual hot and cold water valves.

35 WEST 134TH STREET—SHOWER BATH

This building is the "last word" in bath buildings. It was formally opened to the public on June 1, 1925, with quite a celebration of the event.

JEANETTE PARK COMFORT STATION

Front Street and Coenties Slip.

For men only.

This station was completed and opened for use during the first quarter of the year.

It is situated on the Front Street side facing the open space at east side of Jeanette Park which is located at Coenties Slip and South Street. It is also built upon a site at back of the bandstand in the Park.

The patronage of this station is a sure indication of its necessity there, as this is the center of a large floating population of seamen and others.

WEST 61ST STREET AND CENTRAL PARK COMFORT STATION

Located in Central Park with entrances from above location; also from the park pathways.

Building was opened June 1, 1925.

McNALLY PLAZA COMFORT STATION

Amsterdam Avenue and 181st Street

For Men and Women

Plans and specifications were prepared and bids were obtained, but lowest bidder exceeded the appropriation and also failed to accept or proceed with work. Upon readvertising and letting, contracts were given for:

General Construction	$25,710.00
Plumbing	8,635.00
Steam Heating	1,750.00
Total	$36,095.00

A sewer was laid through rock cut to the street a distance of 140 feet. Work is going on and is about 15% completed.

SEWAGE SCREENING PLANT—FOOT OF CANAL STREET AND HUDSON RIVER

This is a new plant opened this year and serves a considerable down-town section in the abating of pollution of the river. The event of its opening was celebrated by addresses and a luncheon served within its confines before it was put in use.

WORK COMPLETED BY SQUADS DURING YEAR 1925

Squads	*Jobs*
Carpentry	280
Electrical	735
Plumbing	244
Steamfitting	111
Painting and Varnishing	158
Machinist	144
Roofing	389
Masonry	148
Awning	93
Thermostat	29
Total	2,331

1,423 Requisitions were drawn and open market orders issued.

1,313 Check orders were issued upon the monthly orders and contracts.

The patronage of the interior and floating baths was as follows:

Interior Baths	Male	Female	Total	Floating Baths (Season to Oct. 1)	
				Male	Female
1st quarter	1,196,462	741,900	1,938,362	.....	.....
2nd quarter	1,673,345	1,057,517	2,730,862	693,272	460,909
3rd quarter	2,039,424	1,281,340	3,320,764		
4th quarter	1,299,834	855,715	2,155,549	.....	.....
Total	6,209,065	3,936,472	10,145,537		1,154,181
			1,154,181		
Total both interior and floating			11,299,718		

	Allen Street	Carmine Street	Cherry and Oliver Streets	Madison Street	Rivington Street	Rutgers Place	East 11th Street	East 23rd Street
January								
Male	18,437	15,241	23,384	.....	37,295	32,943	49,721	25,711
Female	12,576	8,234	10,049	.....	36,671	23,969	33,503	15,133
Total	31,013	23,475	33,433	.....	73,966	56,912	83,224	40,844
February								
Male	16,743	16,699	25,004	.....	32,814	31,364	40,637	26,491
Female	13,255	9,275	10,613	.....	29,622	23,279	30,854	15,310
Total	29,998	25,974	35,617	.....	62,436	54,643	71,491	41,801
March								
Male	20,397	20,470	30,611	.....	39,418	39,318	51,208	32,110
Female	15,084	11,636	13,559	.....	35,898	28,082	36,833	20,536
Total	35,481	32,106	44,170	.....	75,316	67,400	88,041	52,646
April								
Male	20,403	24,051	33,746	4,358	36,003	35,567	55,964	32,192
Female	16,408	13,520	14,761	2,596	31,956	25,480	34,837	21,246
Total	36,811	37,571	48,507	6,954	67,959	61,047	90,801	53,438
May								
Male	27,409	25,127	37,951	19,804	42,707	37,031	53,298	36,279
Female	19,571	13,371	17,197	13,657	37,127	29,835	37,368	22,849
Total	46,980	38,498	55,148	33,461	79,834	66,866	90,666	59,128
June								
Male	34,169	43,663	56,779	33,986	45,540	42,555	71,824	44,065
Female	28,291	26,430	27,507	26,460	39,599	35,380	45,711	28,487
Total	62,460	70,093	84,286	60,446	85,139	77,935	117,535	72,552
July								
Male	40,647	43,365	61,603	34,538	48,958	37,993	81,685	43,409
Female	24,832	25,225	29,551	27,532	42,132	30,498	48,887	26,003
Total	65,479	68,590	91,154	62,070	91,090	68,491	130,572	69,412
August								
Male	47,346	56,896	57,384	30,947	42,085	41,660	76,342	44,280
Female	31,147	25,437	26,048	26,117	36,217	33,517	47,678	29,243
Total	78,493	82,333	83,432	57,064	78,302	75,177	124,020	73,523
September								
Male	37,660	36,903	42,047	23,483	35,322	35,092	54,656	38,050
Female	28,209	21,706	21,092	28,901	31,667	28,476	37,543	24,270
Total	65,869	58,609	63,139	52,384	66,989	63,568	92,199	62,320
October								
Male	20,654	21,347	33,566	28,797	33,231	35,342	55,530	26,920
Female	15,184	11,697	15,606	23,637	31,105	28,014	35,941	18,124
Total	35,838	33,044	49,172	52,434	64,336	63,356	91,471	45,044
November								
Male	19,200	19,795	26,787	13,492	30,565	31,297	44,423	25,089
Female	14,497	10,522	11,423	19,737	28,950	25,933	32,872	16,516
Total	33,697	30,317	38,210	33,229	59,515	57,230	77,295	41,605
December								
Male	15,637	19,431	24,782	23,184	30,292	29,137	41,376	24,263
Female	12,252	10,221	11,550	18,669	28,785	22,965	28,946	14,936
Total	27,889	29,652	36,332	41,853	59,077	52,102	70,322	39,199
Grand Totals	550,008	530,262	662,600	399,895	863,959	764,727	1,127,637	651,512

FOR YEAR 1925

BATHS

West 28th Street	West 41st Street	East 54th Street	West 60th Street	East 76th Street	East 109th Street	West 134th Street	Male	Female	Total
55,265	27,218	20,876	23,203	21,081	32,780	.....	383,155		
38,395	9,954	7,530	16,557	11,377	13,696	.....		237,644	
93,660	37,172	28,406	39,760	32,458	46,476	.....			620,799
48,960	23,824	23,126	22,288	22,347	29,150	.....	359,447		
31,567	7,911	8,722	16,069	13,464	13,684	.....		223,625	
80,527	31,735	31,848	38,357	35,811	42,834	.....			583,072
63,790	30,556	29,232	27,513	34,171	35,066	.....	453,860		
41,239	10,269	11,394	20,691	20,628	14,782	.....		280,631	
105,029	40,825	40,626	48,204	54,799	49,848	.....			734,491
62,770	25,906	32,447	27,508	25,960	38,928	.....	455,803		
43,446	15,588	12,653	21,272	16,808	20,035	.....		290,606	
106,216	41,494	45,100	48,780	42,768	58,963	.....			746,409
71,590	32,491	30,179	30,685	30,337	40,784	.....	515,672		
44,449	11,596	15,934	23,281	17,619	21,377	.....		325,231	
116,039	44,087	46,113	53,966	47,956	62,161	.....			840,903
79,611	35,799	48,256	51,738	34,958	47,088	31,839	701,870		
55,029	13,879	17,683	29,252	22,956	25,686	19,330		441,680	
134,640	49,678	65,939	80,990	57,914	72,774	51,169			1,143,550
77,120	34,922	49,942	47,927	32,051	43,105	31,372	708,637		
56,851	13,577	16,421	31,221	23,013	22,615	19,197		437,555	
133,971	48,499	66,363	79,148	55,064	65,720	50,569			1,146,192
76,180	35,243	53,254	52,114	38,478	56,711	25,743	734,663		
58,946	13,356	18,222	31,302	29,268	28,530	18,425		453,453	
135,126	48,599	71,476	83,416	67,746	85,241	44,168			1,188,116
72,105	32,066	46,381	43,947	25,883	47,839	24,690	596,124		
52,216	11,385	15,700	26,753	20,768	24,685	16,961		390,332	
124,321	43,451	62,081	70,700	46,651	72,524	41,651			986,456
59,350	30,626	29,524	34,482	28,084	39,889	24,427	501,769		
44,706	11,591	10,940	23,857	17,045	19,275	17,042		323,764	
104,056	42,217	40,464	58,339	45,129	59,164	41,469			825,533
50,135	26,963	22,164	26,009	19,586	26,077	20,273	401,855		
35,568	12,489	9,551	18,911	13,076	12,162	14,157		276,364	
85,703	39,452	31,715	44,920	32,662	38,239	34,430			678,219
51,170	27,088	19,858	24,407	20,747	25,404	19,434	396,210		
35,899	8,411	7,979	18,991	11,363	11,164	13,456		255,587	
87,069	35,499	27,837	43,398	32,110	36,568	32,890			651,797
1,306,357	502,708	557,968	689,978	551,068	690,512	296,346	6,209,065	3,936,472	10,145,537

ANNUAL REPORT

BUREAU OF BUILDINGS

BOROUGH OF MANHATTAN

FOR THE YEAR ENDING
DECEMBER 31, 1925

CONTENTS

	Page
Accidents	95
Appendix—New Materials and Modifications	115
Block and Lot Division	90
Buildings, new	79
Building Statistics	81
Building Zone Changes	112
Bulletins—New Materials and Modifications	115
Court Decisions	109
Demolitions	84
Elevator Accidents	87
Elevator Division	102
Engineering Division	86
Excavations of Interest	98
Increased Valuation	79
Inspection Division	90
Monroe House Removal	94
New Materials	87
Notable Buildings	84
Occupancy Survey	113
Office Equipment	114
Plan Desk	89
Plumbers—Unlicensed	101
Plumbing Division	99
Public Safety Division	103
Signs	111
Stenographic Division	110
Unsafe Buildings	96
Violation Division	106

TABLES

Table		Page
I.	Comparative Statement for Years 1924-25	80
II.	Proposed New Buildings Providing Housing Years 1915-1925	80
III.	Plans and Specifications for New Buildings Filed and Acted Upon During the Year Ending December 31, 1925	81
IV.	Plans and Specifications for Alterations to Buildings Filed and Acted Upon During the year Ending December 31, 1925	81
V.	New Buildings and Alterations by Months, 1925	81
VI.	Comparative Statement for New Buildings for the Years 1920-1925	82
VII.	Comparative Statement for Alterations for the Years 1920-1925	82
VIII.	Buildings Applied for, Completed and Demolished	84
IX.	Demolitions	84
X.	Total Number of Inspections, 1925	94
XI.	Accidents Reported During 1925	95
XII.	Summary of Unsafe Building Cases January 1, 1915, to December 31, 1925	99
XIII.	Nature of Violations Filed	108
XIV.	Violation Cases Pending January 1, 1926	108
XV.	Exit Orders Pending	109

PLATES

Plate		Page
I.	Overloaded Floor Slab Failure	91
II.	Vandalism—Exterior—Rear View	92
III.	Vandalism—Interior—Stair Hall	93
IV.	Derrick Accident Showing Boom	94
V.	Derrick Accident Showing Foot Block	95
VI.	Moving Monroe House—Old Location	96
VII.	Moving Monroe House—New Location—Front View	97
VIII.	Moving Monroe House—New Location—Rear View	97
IX.	Inspection Division Showing Old Wood Furniture	114
X.	Inspection Division Showing New Steel Furniture	115

Hon. JULIUS MILLER,
President, Borough of Manhattan,
City of New York.

Dear Sir:

Following is the report of the operations of the Bureau of Buildings of the Borough of Manhattan, City of New York, during the year ending December 31, 1925.

Respectfully,

CHARLES BRADY,
Superintendent of Buildings.

January, 1926.

ANNUAL REPORT

Increased Valuation

In reviewing the activities of the Bureau for the past year, the outstanding feature is the record breaking volume of new work filed. The estimated cost of proposed new buildings is the largest in the history of the Bureau. The value of those filed in 1925 is $370,776,504, an increase of $112,014,919 over the preceding one-year period. This represents an average per working day of $1,348,278 for new buildings. The average estimated cost of alterations filed per working day is $102,381.

The valuation of new tenements represents an increase of approximately 12 per cent. over the preceding year. There has been, however, a large and rapid increase in the number of hotels or non-housekeeping apartment buildings. The total valuation for residential buildings for 1925 is approximately three times that for 1924, and the increase is largely due to the increase in this type of residential building.

The aggregate figures for business buildings of all classes indicate an increase in valuation of approximately 35 per cent. This increase represents a slight increase in office building valuation, but a still larger increase in the valuation of buildings providing for factory use, and a combination of business and factory use.

The statistics this year with regard to the number of stables and garages are more nearly representative than those of the last few years. In 1922 and 1923 many small portable metal garages were constructed in the city, which increased the number of buildings without correspondingly increasing the valuation. The buildings represented by the figures for this year are nearly all of permanent construction.

The large increase in the valuation for hospitals represents the filing for the first section of the new Columbia-Presbyterian Medical Centre projected for the block bounded by Broadway and 165th Street, Fort Washington Avenue and 168th Street.

Following is a summary of permits applied for for new buildings and alterations in the Borough of Manhattan during 1925.

	Applications	Buildings	Estimated Cost
New Buildings	796	940	$370,776,504
Alterations	2,863	3,126	28,154,900
Totals	3,659	4,066	$398,931,404

TABLE I

Comparative Statement for years 1924-1925

	1924	1925
New buildings and alterations applied for	4,143	4,046
Estimated cost of new buildings and alterations	$286,653,202	$398,931,404
New buildings commenced	582	560
New buildings completed	616	557
Alterations commenced	2,207	2,130
Alterations completed	2,491	2,409
Defective elevators reported	1,773	1,595
Defective elevators made safe on notice from this Bureau	1,809	1,579
Elevator cases forwarded for prosecution	2	2
Unsafe buildings made safe or taken down	1,799	1,637
Violations removed	5,545	5,627
Total number of construction inspections	138,920	134,423
Total number of elevator inspections	75,603	77,547
Total inspections of plumbing and drainage	53,222	52,192

TABLE II

Proposed New Buildings Providing Housing, Years 1915-1925

Year	DWELLINGS		TENEMENTS			OTHER RESIDENCE BUILDINGS	
	No.	Estimated Cost	Bldgs.	Apartments	Estimated Cost	No.	Estimated Cost
1915	25	792,500	193	6,436	24,960,500	9	2,030,000
1916	38	3,065,700	183	7,721	37,841,500	27	26,717,000
1917	5	420,000	23	838	2,661,000	5	2,750,000
1918	4	215,000	9	395	1,780,000	1	750,000
1919	19	1,904,500	44	1,801	13,575,000	14	8,788,000
1920	22	1,503,500	22	1,134	13,565,000	3	1,915,000
1921	135	3,015,300	109	4,532	33,435,000	4	14,600,000
1922	40	2,477,976	169	8,310	56,690,000	26	26,180,000
1923	136	2,103,000	225	11,596	76,091,500	18	10,765,000
1924	67	1,511,500	228	9,779	100,270,100	25	25,751,000
1925	27	1,499,000	229	11,962	112,335,000	68	79,904,000

BUILDING STATISTICS

Statistical information in regard to all new building and alteration operations in the Borough of Manhattan during the year is contained in Tables III, IV and V.

A comparative statement of new building operations during the years 1920 to 1925, inclusive, is contained in Table VI, and Table VII is the statistical record of alterations recorded for the same period.

Table VIII is a record of the buildings applied for, completed and demolished during the period 1915 to 1925, inclusive.

TABLE III

Plans and Specifications for New Buildings Filed and Acted Upon During the Year Ending December 31, 1925

Classification	No. of Plans	No. of Bldgs.	Estimated Cost
Dwellings, estimated cost over $50,000	7	8	$1,140,000
Dwellings, estimated cost between $20,000 and $50,000	3	4	136,000
Dwellings, estimated cost under $20,000	9	15	223,000
Tenements	225	229	112,335,000
Hotels	45	46	64,630,000
Other residence buildings	22	22	15,274,000
Stores, lofts, etc., estimated cost over $30,000	39	39	15,410,000
Stores, lofts, etc., estimated cost between $15,000 and $30,000	15	15	352,000
Stores, lofts, etc., estimated cost under $15,000	22	26	184,300
Office buildings	58	58	67,322,000
Manufacturing and workshops	93	93	53,129,500
Schoolhouses	7	7	2,368,000
Churches	12	12	1,080,000
Public buildings, municipal	15	15	1,129,400
Public buildings, places of amusement, etc.	31	34	9,840,000
Hospitals	7	7	14,010,000
Stables and garages	137	245	12,061,943
Other structures	49	65	151,361
Totals	796	940	$370,776,504

TABLE IV

Plans and Specifications for Alterations to Buildings Filed and Acted upon During the Year Ending December 31, 1925

Classification	No. of Plans	No. of Bldgs.	Estimated Cost
Dwellings	623	674	$4,036,025
Tenements	692	777	3,073,030
Hotels	71	79	1,273,300
Other residence buildings	184	203	1,927,870
Stores, lofts, etc.	359	402	3,141,170
Office buildings	321	337	6,149,306
Manufacturing and workshops	349	380	3,391,332
Schoolhouses	22	22	1,653,100
Churches	25	26	320,960
Public buildings, municipal	18	18	438,300
Public buildings, places of amusement, etc.	98	103	1,234,985
Stables and garages	101	105	1,515,522
Totals	2,863	3,126	$28,154,900

TABLE V

New Buildings and Alterations, by Month, 1925

1925	NEW BUILDINGS			ALTERATIONS		
	No. of Plans	No. of Bldgs.	Estimated Cost	No. of Plans	No. of Bldgs.	Estimated Cost
January	64	66	$27,403,300	192	213	$3,161,475
February	58	68	17,978,500	211	229	1,887,425
March	87	199	24,097,774	285	308	2,691,152
April	65	66	42,006,500	267	311	2,203,865
May	60	66	15,759,000	336	380	2,458,005
June	63	66	21,453,800	272	289	2,656,355
July	70	71	35,338,400	260	285	1,816,885
August	64	68	42,342,700	219	240	3,090,058
September	60	60	28,063,350	214	226	2,118,280
October	66	67	43,280,525	197	212	2,132,715
November	78	80	35,756,455	201	212	1,092,740
December	61	63	37,296,200	209	221	2,845,945
Totals	796	940	$370,776,504	2,863	3,126	$28,154,900

TABLE

Comparative Statement for New Buildings

	1925			1924		
	No. of Plans	No. of Bldgs.	Estimated Cost	No. of Plans	No. of Bldgs.	Estimated Cost
Dwellings, est. cost over $50,000	7	8	$1,140,000	4	4	$495,000
Dwellings, est. cost between $20,000 and $50,000	3	4	136,000	3	19	390,000
Dwellings, est. cost under $20,000	9	15	223,000	16	44	626,500
Tenements	225	229	112,335,000	210	228	100,270,100
Hotels	45	46	64,630,000	12	12	19,875,000
Other residence buildings	22	22	15,274,000	13	13	5,876,000
Stores, lofts, etc., est. cost over $30,000	39	39	15,410,000	21	21	6,460,000
Stores, lofts, etc., est. cost between $15,000 and $30,000	15	15	352,000	10	10	225,000
Stores, lofts, etc., est. cost under $15,000	22	26	184,300	21	23	80,150
Manufacturing and workshops	93	93	53,129,500	63	63	34,781,800
Office buildings	58	58	67,322,000	60	60	57,837,500
Schoolhouses	7	7	2,368,000	15	15	9,115,000
Churches	12	12	1,080,000	7	7	2,115,000
Public buildings, municipal	15	15	1,129,400	11	13	830,300
Public buildings, places of amusement, etc	31	34	9,840,000	20	20	6,975,000
Hospitals	7	7	14,010,000	4	4	1,975,000
Stables and garages	137	245	12,061,943	154	290	10,540,990
Other structures	49	65	151,361	73	80	293,245
Totals	796	940	$370,776,504	717	926	$258,761,585

TABLE

Comparative Statement for Alterations

	1925			1924		
	No. of Plans	No. of Bldgs.	Estimated Cost	No. of Plans	No. of Bldgs.	Estimated Cost
Dwellings	623	674	$4,036,025	715	779	$5,075,410
Tenements	692	777	3,073,030	704	789	3,055,534
Hotels	71	79	1,273,300	61	66	1,022,338
Other residence buildings	184	203	1,927,870	156	175	2,288,213
Stores, lofts, etc	359	402	3,141,170	401	435	4,294,326
Office buildings	321	337	6,149,306	264	279	4,460,800
Manufacturing and workshops	349	380	3,391,332	381	421	3,379,048
Schoolhouses	22	22	1,653,100	16	16	280,200
Churches	25	26	320,960	27	29	988,000
Public buildings, municipal	18	18	438,300	10	10	403,800
Public buildings, places of amusement, etc	98	103	1,234,985	102	106	896,150
Stables and garages	101	105	1,515,522	104	112	1,747,798
Totals	2,863	3,126	$28,154,900	2,941	3,217	$27,891,617

VI

for the Years 1920-1925

1923			1922			1921			1920		
No. of Plans	No. of Bldgs.	Estimated Cost	No. of Plans	No. of Bldgs.	Estimated Cost	No. of Plans	No. of Bldgs.	Estimated Cost	No. of Plans	No. of Bldgs.	Estimated Cost
4	4	$515,000	11	11	$2,080,000	10	10	$1,855,000	8	8	$1,170,000
11	16	430,000	6	8	225,000	9	10	280,000	9	10	295,000
19	116	1,158,000	16	21	172,976	26	115	880,300	4	4	38,500
204	225	70,091,500	165	169	56,690,000	101	109	83,435,000	22	22	13,565,000
7	7	6,291,000	13	13	18,000,000	4	4	14,600,000	3	3	1,915,000
11	11	4,474,000	13	13	8,180,000	.....	.....	.....	.....	.....	.....
22	22	3,695,000	41	42	5,639,000	37	38	11,159,000	26	27	6,591,000
18	18	389,000	21	22	488,800	21	21	469,000	8	8	176,000
21	21	94,200	38	39	206,680	32	34	177,325	11	13	69,250
69	69	26,712,600	41	42	5,195,800	53	53	6,561,783	23	23	8,232,700
58	56	36,437,800	71	71	23,884,000	65	67	36,423,000	79	81	44,668,400
13	13	5,851,500	12	13	8,085,000	4	4	2,135,000	3	3	500,000
8	9	1,516,000	8	8	725,000	11	11	1,305,000	1	1	60,000
5	5	4,420,000	7	6	1,526,000	5	5	839,000	12	14	1,676,800
18	18	2,721,000	16	16	3,462,500	25	27	6,535,900	25	25	5,140,000
6	6	1,380,000	6	7	2,738,000	1	1	75,000	8	8	5,350,000
125	872	6,542,755	131	499	3,584,256	138	348	4,162,453	160	482	6,348,318
52	79	262,105	53	73	58,665	65	79	139,680	47	51	403,892
671	1,569	$178,981,460	669	1,075	$140,941,677	607	936	$121,032,441	449	783	$96,199,860

VII

for the Years 1920-1925

1923			1922			1921			1920		
No. of Plans	No. of Bldgs.	Estimated Cost	No. of Plans	No. of Bldgs.	Estimated Cost	No. of Plans	No. of Bldgs.	Estimated Cost	No. of Plans	No. of Bldgs.	Estimated Costs
620	683	$4,716,224	701	778	$5,191,656	935	1,037	$6,932,670	1,171	1,380	$11,060,000
600	657	2,969,130	641	715	3,219,320	495	550	2,924,038	570	678	4,142,825
67	72	534,975	85	95	1,091,318	71	72	672,315	93	100	1,937,500
157	167	1,369,720	115	132	622,350	.....	.....	.....	.....	.....	.....
448	485	3,596,338	503	540	2,541,505	477	514	3,259,637	604	667	4,638,160
291	307	3,669,690	334	353	4,039,853	361	393	4,207,355	382	414	13,498,840
421	459	2,935,463	443	478	1,949,135	435	481	2,208,325	329	366	2,746,050
34	42	1,183,200	28	28	889,200	22	24	494,250	37	39	601,189
23	23	162,202	26	26	229,100	24	25	352,740	31	34	494,500
14	14	640,045	21	23	2,523,380	23	26	582,800	21	21	299,100
102	114	2,358,858	125	130	1,311,825	129	133	1,023,310	122	125	2,123,330
116	121	914,974	116	124	645,282	148	159	915,620	167	184	1,468,209
2,893	3,164	$25,050,819	3,138	3,422	$24,253,924	3,120	3,414	$23,573,060	3,527	4,008	$42,999,703

TABLE VIII

Buildings Applied for, Completed and Demolished

Year	BUILDINGS APPLIED FOR				BUILDINGS COMPLETED				BUILDINGS DEMOLISHED			
	Total	Dwellings	Tenements	Hotels, etc.	Total	Dwellings	Tenements	Hotels, etc.	Total	Dwellings	Tenements	Hotels, etc.
1915...	489	25	193	9	348	26	133	9	584	325	98	132
1916...	564	38	183	27	316	17	145	8	654	307	90	1
1917...	321	5	23	5	345	8	85	7	373	110	44	4
1918...	182	4	9	1	195	7	20	3	261	39	37	.....
1919...	379	19	44	14	166	4	5	6	687	154	81	5
1920...	783	22	22	3	253	4	26	8	679	284	111	4
1921...	936	135	109	4	433	63	31	7	457½	129	128	2
1922...	1,075	40	169	26	540	45	102	9	684	249	220	3
1923...	1,569	136	225	18	506	19	109	15	887	488	252	1
1924...	926	67	228	25	616	44	170	7	1,144	600	305	2
1925...	940	27	229	68	557	19	150	13	1,493	742	445	6

DEMOLITIONS

In Manhattan this year as in other years, the number of buildings demolished exceeds the number erected. The number of buildings completed during the year amounts to 557, whereas those demolished number 1,493.

This does not, of course, result in a consequent loss of accommodation. On the contrary, in many cases where several small dwellings or other buildings are demolished there is erected in their place a huge building for any one of a number of purposes with accommodations for hundreds and in many cases thousands of persons.

Table IX is a record of the number and classification of buildings demolished in Manhattan during 1925.

TABLE IX

Demolitions—1925

Demolition notices received	425
Classification of Buildings Demolished:	
Dwellings	688
Stores and dwellings	54
Tenements	445
Hotels	6
Business buildings	213
Public buildings	22
Miscellaneous	65
Total	1,493

From the above it will be seen that more buildings were demolished than notices of demolition received. This is explained by the fact that one notice very often covers several buildings.

NOTABLE BUILDINGS

The influences affecting the height of new buildings in the borough were touched upon in the annual report of 1924. Coincident with the large increase in both the number and value of the new buildings in the borough, there has been a corresponding increase in the number of buildings of more than ordinary height. During the year 1925, 139 applications

were filed for buildings more than twelve stories high, exclusive of tenement houses, as compared to 50 applications in 1924. The heights vary from 13 to 42 stories, and the classification by use is as follows:

Hotels or non-housekeeping apartments	45
Offices and business buildings	42
Factories	50
Hospitals	2

Although during recent years there has been a decided movement of business to the mid-town section of the city, an unusual number of tall buildings has been filed for the down-town section. Twelve applications have been filed for buildings south of Duane Street, ranging from thirteen to thirty-four stories in height. The tallest of this group is to occupy the site of the present Mills Building, and will have frontages on Exchange Place, Wall and Broad streets, extending around the present J. P. Morgan Bank building. Two business

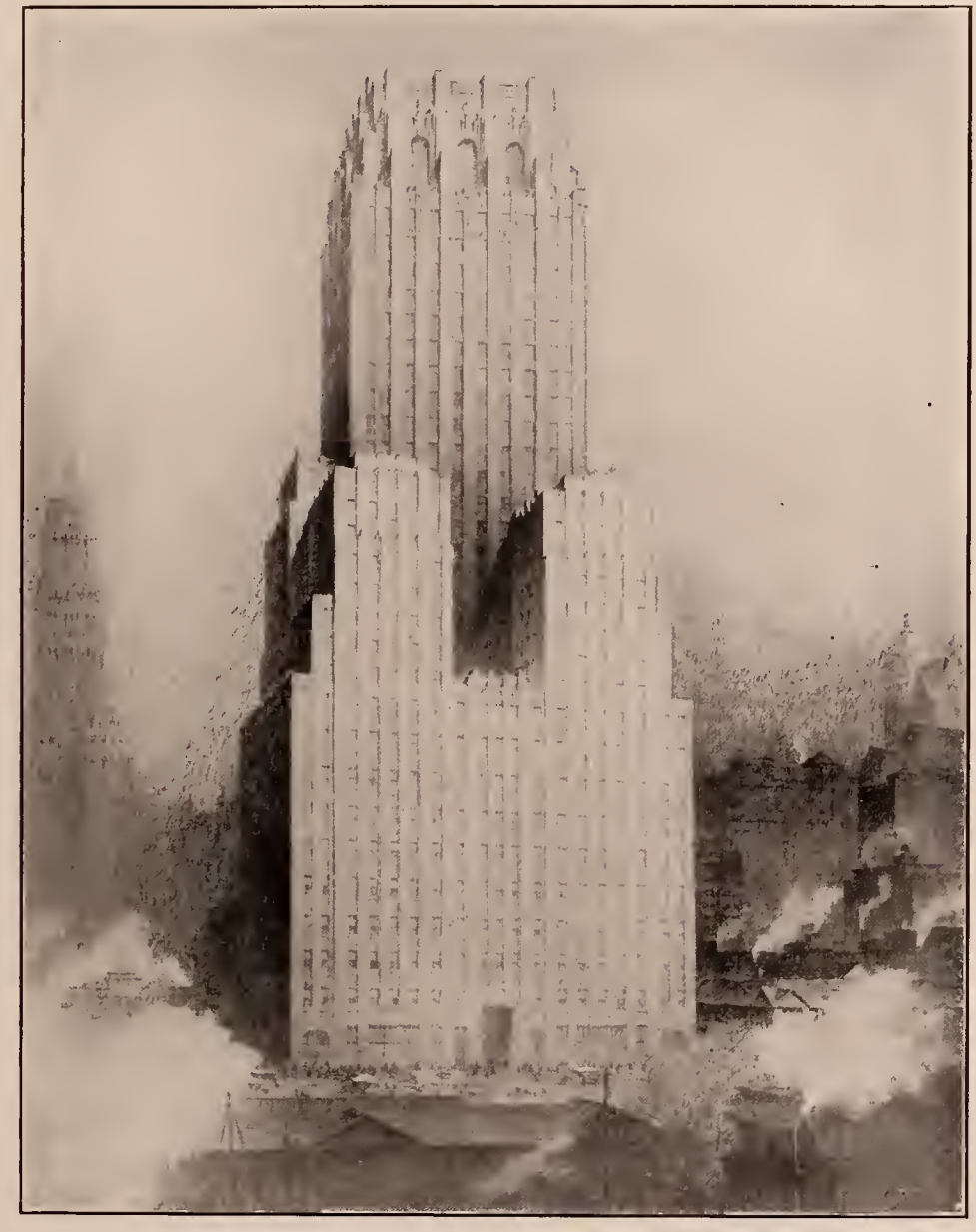


PLATE A—TELEPHONE BUILDING—BLOCK BOUNDED BY BARCLAY, WASHINGTON, VESEY AND WEST STREETS. ILLUSTRATING THE SET-BACK AND THE SO-CALLED TOWER PROVISIONS OF THE BUILDING ZONE RESOLUTION

buildings, one 18 stories and one 24 stories high, will occupy the site of the former blind asylum on Ninth Avenue, between 33d and 34th Streets. The site of the old Monroe house is to be occupied by a fifteen story factory building fronting on Prince, Crosby and Lafayette Streets. The easterly end of the Fourth Avenue car barn site is to be occupied by a fifteen story office building extending from 32d Street to 33d Street. The site of the Putnam office building on Broadway, between 43d and 44th Streets, is to be occupied by a 29-story office building with a theatre in the rear. The site of the Delmonico restaurant, northeast corner 44th Street and Fifth Avenue, is to be occupied by a 33-story office building, and a 31-story office building is to occupy a site at the northeast corner 45th Street and Fifth Avenue. Two 31-story apartment hotels are to occupy the block front on the westerly side of Seventh Avenue from 55th to 56th Streets, known as the Commonwealth Hotel site. The site of the Vanderbilt mansion on the westerly side of Fifth Avenue, 57th to 58th Streets, is to be occupied by a 42 story business and hotel building.

Plate "A" is a view of the Telephone Building occupying the entire block bounded by West, Vesey, Washington and Barclay Streets, which was included among the buildings of unusual height referred to in the annual report of 1924 and substantially completed during the current year. To provide for the erection of this building 35 separate buildings were demolished.

ENGINEERING DIVISION

This division of the bureau is organized as follows:

Chief Inspector.
Assistant Engineer in Charge.
15 Assistant Engineers examining plans.
One Assistant Engineer examining plans and supervising tests.
Three Elevator Inspectors.
One Engineer Inspector examining plumbing plans.
One Plumbing Inspector.
One stenographer.
Four Clerks (one assigned to Information Desk).

All applications and plans for new buildings, alterations, plumbing and drainage systems, elevators, roof, ground, and electric signs, and floor computations are examined by the assistant engineers and inspectors, and recommendation for approval is made when the papers indicate compliance with the building regulations.

Applications handled by this division are divided into three general classes: construction, elevator, and plumbing, and are assigned for examination to the employes whose knowledge and experience qualify them to review the papers. Examination of the various applications requires a working knowledge of the fundamental principles of structural mechanics, as well as familiarity with the building regulations contained in the Code of Ordinances, including the Building Code, the Building Zone Resolution, the Labor Law, the Industrial Code, and the Rules of the Board of Standards and Appeals. The assistant engineers are frequently called upon to make special examinations or investigations involving technical requirements of the building regulations, and one assistant engineer is specially assigned to the investigation of new materials and new forms of construction for which the approval of the bureau is requested.

In the case of new materials of construction requiring test, all test samples are selected by the assistant engineer, who also witnesses the tests and reports the results of his observations. This assistant engineer is usually assigned to supervise and report on soil tests, test of foundation piles, and load tests of finished structures.

In addition to the applications enumerated elsewhere in this report, the examiners in this division have acted upon approximately 14,000 amendments during the year.

NEW MATERIALS OF CONSTRUCTION

The tests of new building materials or forms of building construction not specifically provided for in the Code consist of fire, load and water tests for fireproof floor and roof construction; fire tests for partitions; bending, compression, absorption, and freezing and thawing tests for brick and similar materials, and compression and absorption tests for hollow building blocks. As previously stated, the selection of test specimens and the installation of floor and partition panels for all tests are carried out under the supervision of an assistant engineer.

During 1925 fifteen approvals were granted under the provisions of section 22 of the Building Code. These materials consisted of three forms of roof and floor construction, one form of partition construction, three concrete blocks, one cement brick and one sand lime brick, one form of wall construction for frame buildings, three cements, connection details for Lally columns, and one material for fireproof and sanitary flooring and finish. Approval was also issued for one appliance. The bureau's representative also selected and observed tests of a large number of specimens of fireproofed wood for interior flooring and trim in buildings more than 150 feet high. A list of the approvals of new materials is contained in the appendix to this report.

ELEVATOR APPLICATIONS

During 1925 there were received in the division a total of 838 elevator applications for the installation, alteration or replacement of elevators in buildings in the borough. Seven hundred and eighty-nine amendments to the applications were filed before they were finally approved. Sixteen applications were withdrawn.

This number of applications is the largest ever received in any year in the history of the bureau. The number of elevators proposed to be installed, altered or replaced under these applications was 1,535, which is 170 more than the largest number ever proposed in any previous year. A further examination shows there were 130 more passenger elevators to be installed, 20 more freight elevators, but 21 less sidewalk elevators. It was proposed to alter 29 more passenger elevators, 13 more freight elevators, and one less sidewalk elevator than in the previous year 1924, which was the record year for elevator installations in the history of the bureau.

The applications show the elevators were classed as follows:

Passenger elevators to be installed	945
Freight " " " "	154
Sidewalk " " " "	148
Passenger elevators to be altered	192
Freight " " " "	74
Sidewalk " " " "	22
	1,535

Seventy-three automatic push button elevators were to be installed and two altered. Sixty changes in operating devices were approved. Twelve changes in classification from freight to passenger service were made, and six variations of the elevator rules were granted.

In addition to the work of examining elevator applications, the inspectors assigned to the engineering division perform the duties of special inspectors in all matters relating to elevators, one being assigned to investigate and report on elevator accidents occurring during the period of the day when the regular district inspectors are on their respective districts. A classified report of all elevator accidents reported to the bureau is kept, and information in

relation to these accidents is given to all persons interested in them. The following is a record of their activities:

Telephone calls received from the Police Department	43
Other reports of elevator accidents received and investigated	11
Requests for special inspectors in court cases	172
Other communications relative to elevators received, investigated and answered	64
Number of violations filed by special inspectors	16
Number of violations dismissed	13
Total	319

During the year 1925, 132 elevator accidents were referred to the engineering division for classification. An analysis of the reports shows the following results:

Accidents in office buildings	25
Accidents in factory buildings	53
Accidents in hotels	13
Accidents in tenements	15
Accidents in garages	3
Accidents in miscellaneous buildings	23
	132

Defects

Defects in machines, brakes, controllers, sheaves	24
Defects in hoist ropes, counterweight ropes, and hoist chains	4
Defects in operating devices	1
Defects in over-speeding car	1
	30

Carelessness

Overloading	2
Struck by car	4
Struck by counterweight	2
Fell down the shaft	42
Caught between the car and the shaft	52
Carelessness of operators, passengers, and non-passengers	93
Unknown causes	9

Results of Accidents

Number killed in connection with passenger elevators	23
Number injured in connection with passenger elevators	108
Number killed in connection with freight elevators	8
Number injured in connection with freight elevators	31
Number killed in connection with sidewalk elevators	4
Number injured in connection with sidewalk elevators	13
Number of operators affected by accidents	48
Number of passengers affected by accidents	85
Number of non-passengers affected by accidents	54
Accidents of a preventable nature	119
Accidents of an unpreventable nature	13

The number of accidents reported to the bureau shows an increase of 6.8 per cent. over 1924. This increase was principally due to general carelessness on the part of the operators and could be greatly reduced, if not actually prevented, if the owners and those persons responsible for the care of the elevators would keep closer supervision over the elevator operators to see that they operate the elevators in accordance with the rules for the safe operation of elevators as posted on the inspection certificate placed in the cars.

Of the total number of accidents, 71 per cent. were due to carelessness on the part of the operators, passengers and non-passengers, 22.3 per cent. were due to defects in machines, ropes and equipment, and 6.7 per cent. were due to unknown causes.

An examination of the accidents recorded against passenger elevators shows there were only two fatal accidents which occurred to passengers while riding on elevators by reason of defects in the elevator machinery, ropes, controllers or hoisting equipment. Eighty-two persons were injured from such causes, 40 of whom were males and 30 females, and 12 operators. On freight and sidewalk elevators there was but one fatal accident as a result of a failure of machinery ropes, controllers, or hoisting equipment, and only eleven were injured from such causes, four of whom were operators.

The record shows that of the total number of fatal accidents on elevators, 11 were operators, 8 passengers, 16 non-passengers. This clearly shows that very few fatal accidents are caused by defects in the elevator machinery, but are principally caused by the carelessness of the operators and those persons killed.

The report shows the necessity for a more rigid enforcement of the rules for the safe operation of elevators by the owners or those in responsible charge of elevators, supplemented by a careful inspection of the elevator equipment so as to reduce the accidents that occur from careless operation or defective equipment.

The number of accidents charged against elevators are in reality not elevator accidents, but are charged because they occur in and about the elevator hoistway. Of the total number of elevator accidents reported for the year, 32 per cent. could be properly classified as hoistway accidents, and 68 per cent. elevator accidents.

There are at present in the Borough of Manhattan 14,296 passenger elevators, exclusive of passenger elevators in private dwellings. Of this number 13,800 are probably in daily use. The estimated number of passengers carried daily by these elevators is 9,650,000 and the estimated number of miles traveled daily by the cars is 67,700 miles. The vertical passenger traffic on elevators in the Borough of Manhattan can be considered remarkable in point of safety for the traveling public who must use the elevators.

The ratio of the number of fatal accidents charged against passenger elevators to the number of passengers carried during the year is as 1:126,000,000. The ratio of the total number of accidents charged against passenger elevators to the number of passengers carried is as 1:22,100,000.

PLAN DESK

Applications and plans for new buildings, alterations, plumbing and drainage, elevators, computations, electric signs, signs and demolitions are received and numbered at the Plan Desk.

Workmen's compensation insurance policies are submitted to this Division for inspection in order to obtain permits for the work specified in the applications approved.

During 1925, 3,950 permits were issued at the Plan Desk.

Application blanks are furnished in this division of the Bureau, and applications and plans are taken from the files for inspection upon request.

The personnel of the division follows:

One clerk in charge.
One new building and alteration application clerk.
One plumbing and drainage, elevator and electric sign application clerk.
One correspondence filing clerk.
Three file clerks.

BLOCK AND LOT DIVISION

One Clerk in Charge.
Four Assistants.

Owing to the constant changing of lot numbers and often of street numbers, it has been found necessary to send all plans and applications pertaining to new buildings to this division for filing under the block and lot designations as soon as completed. Before filing, the street and lot numbers are carefully checked and if any changes have been made the same are noted and all prior plans and applications are refiled under the proper lot number and any change in street number noted thereon, thus keeping the files up to date.

Computations to establish permissible floor loads were, prior to 1919, filed with the violations. They are now placed in the block and lot envelope as soon as completed and the refiling of those prior to 1919 is in progress. About 2,500 have been refiled, completing the year 1918. When completed, this will greatly assist the engineers in examining future alterations as well as making them readily accessible to the public.

All new buildings and alteration applications, prior to 1900 and back to the earliest records, 1867, which, owing to age are in poor condition, have been filed in envelopes for protection and indexed so they are readily available for reference without being subjected to the constant handling they would receive if filed in the regular block and lot envelopes.

An appropriation has been secured to install steel file bins for plans to take the place of the wooden bins with which this division was temporarily equipped. These will be in place in a short time and will furnish better protection for the old plans which are in too fragile condition to roll with other plans.

Only by continually shifting the plans and envelopes in the permanent files of the plan room has it been possible to find room for those filed during the past year. The coming year will see all space occupied to capacity and an entire rearrangement, with greatly enlarged space, will be necessary to continue the placing of completed plans in the permanent files.

The plan of checking all applications as to correct block and lot numbers, before filing, has been extended to include the street numbers and dimensions, thus insuring the correct entries in the indexes as well as avoiding filing of amendments to correct errors. Many architects are availing themselves of the privilege of consulting the maps in this division before filling out their applications.

Assistance to the public is cheerfully given in this work, which appears to be appreciated.

INSPECTION DIVISION

The system of inspection districts with one inspector in charge, which was organized in 1917, has been continued this past year with one additional change to add to its effectiveness.

This change is that inspectors now report, before leaving the office, the location of the particular operation each will visit at the end of the day's work. This makes it possible to get in touch with inspectors should occasion require, the inspector being reached either by telephone or personally by the chief inspector.

This change has been another means of aiding the building industry, inasmuch as a builder upon notifying this Bureau on one day that he is ready for a soil inspection before footings are placed, is enabled to place footings at the beginning of the next day's work

his request for inspection having been referred to the inspector on the day it was received, and the soil inspection having been made the same day. Under former conditions, the inspector would not have received the request until the day following its receipt, and the builder meanwhile could not proceed with the placing of the footings. This would mean that he would wait until at the earliest, ten o'clock in the morning of the day following his request

PLATE I—OVERLOADED FLOOR SLAB FAILURE

for a soil inspection, that being about the earliest hours the inspector could visit the premises after leaving the office. It has not been unusual for a builder to request an inspection on Saturday afternoon or after five o'clock when the inspector's day is completed. These requests were always complied with by the Chief Inspector who made the inspection himself.

It has been the aim of the inspection division to be constructively helpful at all times. The enormous amount of construction projected in 1925 gave every employee of this division a maximum amount of work.

While every effort is made to have all safeguards required by law employed on all con-

struction work, it is humanly impossible to guard against carelessness employed when the inspector is not present. An example of such carelessness is illustrated in Plate No. 1 illustrating an instance where material was loaded on a concrete arch which had been in place three days with the result that the arch failed and caused the deaths of two laborers.

Another condition met with almost daily is the erection by mechanics of a scaffold upon which to work for a few hours, and their failure to make it sufficiently strong for its purpose. The Inspection Division endeavors to correct these conditions wherever they are met.

PLATE II—VANDALISM—EXTERIOR—REAR VIEW

Vandalism of vacant buildings is no uncommon thing. In September, 1924, an unsafe order was filed against 103-105 Lewis Street. The buildings at that time were vacant and required very little work to put them in good repair.

The owners, however, paid no attention to the buildings, the result being that on March 25, 1925, they were found, as the result of vandalism, in the condition illustrated by Plates Nos. 2 and 3. The buildings were subsequently demolished on orders issued by this Bureau.

In the annual report for 1924, reference was made to derrick accidents where the construction was of wooden masts and booms. This past year derrick accidents were caused by derricks entirely constructed of steel. Plate No. 4 indicates the boom of a derrick on which one of these accidents occurred, and Plate No. 5, the foot block on which the mast was seated. It appeared at the time the accident occurred that the load of steel which was being hoisted from the street, when it was swung into the building on the floor on which the derrick rested struck the foot block with sufficient force to dislodge it, dropping the load of steel into the building and one of the beams into the street, the foot block descending into the cellar, as shown by Plate No. 5. The operation of this derrick was carried on under a well experienced crew of steel erectors.

PLATE III—VANDALISM—INTERIOR—STAIR HALL

Emergency work caused by the falling of a water tank at 410 West 129th Street and the collapse of the rear portion of a building in the course of demolition at 26 West Forty-Seventh Street was done without expense to the city, as in each instance the owners of the property immediately assumed the costs and paid for the work.

The removal of an existing building from one site to another is so rarely done in Manhattan that mention is made of the removal of the former home of President James Monroe from the northwest corner of Lafayette and Prince Streets to 95 Crosby Street, a distance of about 200 feet.

The building, which was in very bad condition, as Plate No. 6 illustrates, was cabled and tied together with bands of steel before it was raised from its foundation. After it had been moved to be placed on its new site, failure in portions of the old walls required a considerable amount of brickwork to be removed, as indicated by Plates Nos. 7 and 8.

The Inspection Division which is composed of fifty-two inspectors under the supervision of a Chief Inspector, is divided as follows:

1 Supervising Inspector.
3 Night Inspectors.
3 Plastering Inspectors.
4 Iron and Steel Inspectors.
5 Inspectors assigned to special work.
36 Inspectors assigned to construction work.

PLATE IV—DERRICK ACCIDENT SHOWING ROOM

TABLE X
Total Number of Inspections—1925

Construction	133,515
Special Construction	908
Plumbing and Drainage	52,192
Elevator	77,547
Public Safety	16,732
Iron and Steel	10,448
Plastering	10,526
Zoning	1,894
Totals	303,762

Inspection Schedule

The inspectors report at this office every morning and leave for their districts as soon as they have filed their reports of the previous day's work.

They are given locations of fires reported the previous day, as all such premises are inspected to determine whether it is necessary to file an unsafe order directing what must be done to remedy unsafe conditions.

PLATE V—DERRICK ACCIDENT SHOWING FOOT BLOCK

TABLE XI

Accidents Reported During 1925—New Buildings and Alterations

	No. of Accidents	Falling Material		Broken Derrick		By Falling		Concrete Arches		Collapse of Overloaded Floor	
	Per Month	K	I	K	I	K	I	K	I	K	I
January	1							2	1		
February											
March	2		2								
April	2						2				
May	2				3		1				
June	6		3		7	1	1				
July	3		7			1					
August	2	1					1				
September											
October	7		6			3	6				
November	5	1	4			1	1				
December	3		1			1				2	6
Total	33	2	23		10	7	12	2	1	2	6

UNSAFE BUILDINGS

Causes

Unsafe conditions in buildings are caused in many cases as the result of fire, disintegration, overloading, explosion, collapse and other reasons.

In excavating for new buildings on lots where an existing building has been demolished or on vacant lots adjoining existing buildings, the foundations for the new buildings are frequently carried lower than those of adjoining premises, resulting in an unsafe condition.

Some cases are due to disintegration of the masonry work of chimneys and the parapet walls which are continually exposed to the elements.

PLATE VI—MOVING MONROE HOUSE—OLD LOCATION

Such disintegration could be prevented by property owners if the masonry were pointed up from time to time, thus avoiding a larger expense when unsafe orders require rebuilding.

On two occasions during 1925 buildings that were vacant were objects of vandalism to such an extent that immediate action was taken by this Bureau for their removal.

Plates II and III illustrate the conditions.

When Unsafe Orders are Filed

When for any of the foregoing reasons inspectors of this Bureau find either in the course of their regular inspections as the result of complaints that conditions are hazardous, they file what is known as an unsafe building notice.

Requirements

When the unsafe notice covers a condition made dangerous because of an excavation, the requirement is that the adjoining foundation be carried down to the same level as that of the new building being erected. In the case of unsafe conditions in buildings, the order states specifically what must be done to remedy conditions.

PLATE VII—MOVING MONROE HOUSE—NEW LOCATION—FRONT VIEW

PLATE VIII—MOVING MONROE HOUSE—NEW LOCATION—REAR VIEW

Failure to comply with unsafe building orders within a reasonable time, or immediately where delayed compliance is hazardous, results in the filing of a notice of survey.

As a result of many of these surveys, a Supreme Court precept is issued directing the Superintendent of Buildings to take whatever action is necessary to remedy the unsafe conditions. Or, if in the opinion of the superintendent of buildings, there exists danger to life and property by reason of any defective or illegal work in a building, or if a building is immediately dangerous to life and property for other reasons, it is ordered vacated by the superintendent of buildings until conditions are made safe. When conditions cannot be remedied, the building is ordered demolished.

SPECIAL ACTION TO DEMOLISH BUILDINGS

By direction of the Commissioners of the Sinking Fund, and in accordance with Section 205 of the Greater New York Charter, five buildings, fences, etc., on property selected for school purposes on the north side of Stanton Street, between Mangin and Tompkins Streets, and six buildings, Nos. 105 to 115 East 111th Street, and nine buildings, Nos. 106 to 122 East 112th Street on property selected for school purposes, were demolished under the direction of the Inspector in charge of Unsafe Buildings, during 1925.

EXCAVATIONS OF PECULIAR HISTORICAL INTEREST

At times excavations made for new buildings are of historical interest. In one instance an excavation was being made at Dyckman Street and the bones of a mastodon were uncovered. The attention of the American Museum of Natural History was called to this and a representative was immediately sent and secured the bones for the museum, considering them interesting specimens and appreciating the co-operation of the Bureau in bringing the matter to their attention.

In excavating for the Evening Post Building at Carlisle, Washington and West Streets, a number of Revolutionary cannon-balls and large chains were uncovered. This was called to the attention of the Sons of the American Revolution who removed these revolutionary relics to their headquarters at Fraunces' Tavern, greatly appreciating the action of the Bureau.

Following is a summary of the operations of the Unsafe Building Desk during the year 1925:

Cases pending January 1st, 1925	499	
Cases filed during the year	1,663	
Total for disposition		2,162
Cases dismissed—Before order of court	1,606	
Following precept	4	
Void for error	27	
Total cases dismissed		1,637
Cases pending December 31st, 1925		525
Buildings or structures made safe	1,518	
Buildings or structures taken down	92	
Surveys held on unsafe buildings	6	
Surveys prepared and countermanded	12	
Cases sent to Law Department	6	
Precepts issued	6	
Precepts pending—Work not performed	2	
Work performed, charges unpaid	none	
Total pending December 31, 1925		2

Notices issued	3,214
Reinspection slips issued	2,237
Second notices issued	1,167
Unsafe cases on tenements filed and Tenement House Department notified	514
Excavation reports filed	7
Dismissal notices issued	2,473

Cases Pending December 31, 1924

Year	*Number of Cases*
1922	4
1923	35
1924	460
Total	499

Cases Pending December 31, 1925

Year	*Number of Cases*
1924	59
1925	466
Total	525

TABLE XII

Summary of Unsafe Building Cases January 1, 1915 to December 31, 1925

Year	Cases Filed	Cases Dismissed	Surveys Held	Precepts Issued	Emergency Cases
1915	2595	2627	3	3	1
1916	2126	2130	11	11	1
1917	1828	1760	16	16	4
1918	1838	1809	8	8	2
1919	1833	1727	6	6	2
1920	2293	2191	11	11	3
1921	2016	2239	4	4	..
1922	2211	2244	7	6	..
1923	1870	2003	6	6	..
1924	1847	1799	5	4	2
1925	1663	1637	6	6	..

PLUMBING DIVISION

Organization

One supervising inspector assigned to take charge of and supervise the work of the field inspection force.

One inspector of plumbing assigned to the examination of plumbing plans.

One inspector of plumbing assigned to the court squad for special work in the prosecution of plumbing cases.

Twenty-one inspectors of plumbing assigned to routine work of district inspection.

One clerk of division in charge of all plumbing records and correspondence relative to plumbing.

Duties of Plumbing Inspectors

Plumbing inspectors of this bureau examined the installation of all plumbing and gas work in new buildings, all repairs and alterations to such work in existing buildings as to material for piping and type of fixtures used and their mechanical construction.

The Borough of Manhattan is divided into twenty-one plumbing districts, with an inspector assigned to each. In addition to responding to notices for inspection the plumbing inspector must patrol his district and keep under observation all plumbing and gas work in progress, so that any violations of the plumbing laws and deviations from plans approved

by this Bureau may be checked. In this way, inspectors are enabled to detect attempts of unscrupulous plumbers and others who frequently try to install plumbing unlawfully and without the knowledge of this bureau. The plumbing inspector must also visit and investigate all plumbing concerns located in his district to ascertain whether or not they are licensed and if they are registered with this Bureau. The annual registration of employing plumbers takes place in the month of March of each year.

Tests

To insure the tightness and durability of plumbing and gas systems the inspector must see that the necessary water, smoke, peppermint and air tests are applied in a satisfactory manner, and he must also investigate all complaints received relative to plumbing and gas work.

Plumbing Appliances Approved

Plumbing appliances which received approval of this Bureau during the year were:

The Halsey Taylor Drinking Fountain No. 604; "Zenitherm," a sanitary material for floors and sides of toilet rooms.

Many other plumbing appliances were submitted, but due to objectionable features they contained failed to meet with the approval of this bureau.

Notable Plumbing Installations

Unlike other boroughs of the greater city, it is notable that due to the high cost of land very few small dwellings were erected in the Borough of Manhattan, and plumbing operations were confined for the most part to buildings of the larger and more expensive type, such as high-class tenements, co-operative apartment houses, business buildings, hospitals and schools, both private and public. Due to the extensive sanitary accommodations being provided in our buildings of today the volume of plumbing installations is constantly increasing.

Among the extensive plumbing operations notable for excellent mechanical construction, quality of material and type of plumbing fixtures were those contained in the Telephone Exchange, the George Washington High School, the Teachers' College, the New Madison Square Garden, Bellevue, Beth Israel and Sydenham Hospitals, and in many modern residence buildings too numerous for special comment.

In the Cathedral of St. John the Divine now under construction, although the plumbing and drainage operation will not be an extensive one, the entire plumbing and drainage system will be composed of extra heavy copper screw piping with accessory fittings and hangers of bronze material, with all screw joints solder sweated and again over-joined with solder wiped joints. Although extremely expensive, a plumbing system of this composition will be satisfactory in service for centuries, and a durable equipment of this quality would be hard to excel.

Remarks

From a sanitary point of view, due to many recent improvements, the plumbing and drainage systems in buildings in the Borough of Manhattan, with their excellent mechanical construction, quality of material and type of plumbing fixtures, have reached a high standard for satisfactory service, durability, comfort and essential sanitation.

Due to construction of public sewers beneath the great majority of our streets and avenues to which our interior drainage systems connect, the old cesspool method of sewage disposal has been almost entirely eliminated, and but few of these cesspools remain in the undeveloped section at the northwest end of the borough. The buildings still using the cesspool method would contribute but a small fraction of one per cent. of the total number of buildings in Manhattan Borough.

The yard water closets and hall toilets are rapidly disappearing from the old buildings and being replaced by sanitary interior toilet accommodations. The old black sinks, the

concrete and soapstone washtubs, the washout bowls and the kitchen boilers are fast becoming things of the past. Even the glazed earthenware plumbing fixtures are being retired to make way for the more beautiful, durable and sanitary vitreous china and enameled iron fixtures. Due to our high water pressure the unsightly roof tank has been eliminated to a great extent and the water closet flush tank is passing to make way for the more improved flushometer. The built-in bathtub and the wall hung water closet bowl have also come to the front as more modern fixtures.

The use of earthenware and lead piping for acid wastes is also gradually being abandoned for other more durable approved piping. The trend to improve is so great that the best of today may be the antique of the near future.

	1924	1925
Plumbing Permits issued	2,421	2,408
Plumbing Repair Slips filed	4,125	5,219
Plumbing Inspections	53,222	52,192
Water Tests	1,150	1,209
Final Tests	2,358	2,524
Gas Tests	4,643	1,029
Plumbing Violations reported	992	1,261
Tenements under inspection December 31	349	315
Tenements commenced during year	851	672
Tenements completed during year	814	706
Miscellaneous buildings under inspection December 31	653	718
Miscellaneous buildings completed	2,182	1,672
Miscellaneous buildings commenced	1,987	1,737
Employing Plumbers Registered	1,519	1,580

Unlicensed Plumbers

The following summarizes the activities of this Bureau relative to unlicensed plumbers reported in 1925:

Totals for Year	1925	1924	1923	1922	1921
Non-licensed plumbers reported	34	13	46	73	84
Arraigned in Magistrate's Court	..	2	..	..	..
Arraigned in Magistrate's Court (Municipal Term)	2	..	4	..	..
Disposed of in Magistrate's Court	2	..	..	..	..
Held for trial in Court of Special Sessions	..	..	2	1	..
Disposed of in Court of Special Sessions	2	..	1	..	..
Committed to the City Prison	..	1	2	..	..
Acquitted	1	..	..	..	..
Illegal plumbing signs reported, also hot water boilers	17	15	20	16	17
Illegal plumbing signs removed, also hot water boilers	10	10	14	13	13
Registered since apprehension	..	2	..	..	..
Licensed but not registered	44	..	..	15	20
Could not be reached with summons	1	..	..	..	..
Registration cancelled	..	1	..	1	..
Shops reported vacated	15	8	19	34	29
Letters sent to persons reported engaged in the illegal practise of plumbing	175	109	121	97	84
Cases investigated and disposed of in connection with the above	156	122	119	93	85
Cases investigated and held in abeyance	54	70	118	..	..

On an average, there were less than three unlicensed plumbing complaints a month, a total of 34 having been filed during the year. While this is an increase over the preceding year when only 13 were filed, it is also considerably less than the number of complaints of this nature reported in previous years. It was necessary to take only two of these cases to court during 1925. In addition to these activities against unlicensed plumbers 141 licensed plumbers were notified to appear at hearings in this Bureau in regard to various complaints.

ELEVATOR DIVISION

There are forty-four district Elevator Inspectors with a Supervising Inspector in charge and two clerks.

Duties of Elevator Inspectors

The inspectors of the Elevator Division must examine at least four times a year all passenger and service elevators, and twice a year all freight and sidewalk elevators in the Borough of Manhattan, to determine whether the elevators including safety devices, cables, doors, locks, shafts and overhead work are in good working order, with no parts excessively worn, and whether the operators are qualified as to age, experience and careful operation of the car.

If the elevator is in safe and lawful condition, a written report is submitted accordingly and placed on file. If not, a violation is filed covering the defects found. Re-inspections on violations are made regularly, also upon request. These reports show what progress is being made to comply with the violation orders filed.

Inspections During Installation and Alteration

During the installation or alteration of passenger service, freight or sidewalk elevators, inspections are made frequently to see that the work is being done in accordance with the application filed with and approved by this Bureau.

A test of each elevator is made upon written request of the elevator contractor, covering carrying capacity, safety devices, speeds, and the operation of devices at the upper and lower limits of travel. A written report is made showing the result of such tests.

Temporary Permits

When a written request is made to this Bureau for a temporary permit to operate an elevator pending the completion of the work approved by this Bureau, the inspector makes a report based on his test and inspections recommending granting or denying the request according to the existing conditions. Upon the expiration of temporary permits granted, the inspector re-inspects and recommends in writing whether or not a renewal should be granted.

The elevator inspectors also investigate all verbal and written complaints on elevators and make a special report of each investigation, filing a violation where necessary.

The inspectors also investigate all elevator accidents and report on them.

The following schedule summarizes the work accomplished by the elevator division and its activities during the year 1925:

Number of passenger elevators in Manhattan	14,296
Number of freight elevators in Manhattan	6,001
Number of sidewalk elevators in Manhattan	4,375
Number of automatic push-button elevators in private houses	952
Number of passenger elevator inspections	48,476
Number of freight elevator inspections	12,386
Number of sidewalk elevator inspections	8,942

Number of special inspections	7,743
Number of violations filed	1,572
Number of elevator violations dismissed	1,579
Number of elevators affected	1,993
Number of elevators tested for which Applications were filed and approved by this Bureau	1,410
Number of freight elevators converted to passenger	15
Number of freight elevators removed	87
Number of sidewalk elevators removed	45
Increase in passenger elevators during 1925	927

During the year 761 temporary permits were issued and 582 were reissued. These temporary certificates permit the operation of a new or existing elevator undergoing alteration, pending the completion of the work and the issuance of the final certificate.

PUBLIC SAFETY DIVISION

Assigned to this Division are:

1 Supervising Inspector in Charge
2 Assistant Engineers
8 Engineer Inspectors
3 Inspectors of Masonry and Carpentry
2 Stenographers
2 Clerks

Included in the duties of this division are the inspection and approval of all buildings and premises for which applications have been made to the License Commissioner for licenses for theatres, dance halls, motion picture theatres, employment agencies and many other miscellaneous licenses. Annually, at the expiration date of these licenses, a reinspection is made before the renewal of a license is granted by the License Commissioner for theatres, dance halls and motion picture theatres. This is a requirement of Article 25 of the Building Code.

Inspections are made of all buildings where orders have been issued by the Fire Commissioner requiring structural changes in the building. The Charter requires the Fire Commissioner to notify the Superintendent of Buildings of such orders and the Superintendent of Buildings certifies to the Fire Commissioner whether the work is completed in accordance with the requirements of such orders.

This division handles all the work connected with Certificates of Occupancy, applications being filed in this Division together with all reports in connection therewith, and copies of the Certificates of Occupancy issued are kept on file in this Division. After all reports of inspections from other Divisions are made as to the completion of a new building or alteration, an inspector from this Division visits the premises and makes a final inspection to determine whether all laws and ordinances are complied with before a Certificate of Occupancy is issued.

All records in connection with appeals to the Board of Standards and Appeals and petitions to the Board of Standards and Appeals are kept in this Division, to which notices of appeal are forwarded. All the necessary papers in connection therewith are then sent to the Board, and when necessary an inspector from this Division appears before the Board to testify at its hearings.

Following is a summary of action in appeals from orders of the Superintendent of Buildings during 1925:

Number of appeals	205
Granted	90
Denied	17
Dismissed	7
Withdrawn	10
No action	81

This Division also investigates all complaints in reference to exit facilities in buildings other than tenement houses and factories. Where the exit facilities are found inadequate, orders requiring the building to be provided with good and sufficient means of exit are filed. In addition to these complaints, it is the duty of the inspectors of this Division on visiting a building for any purpose to give particular attention to the exit facilities and, if they are found to be inadequate, exit orders directing that proper exits be provided in the building are filed. This Division also investigates complaints in connection with violations of the Zoning Ordinance.

During the latter part of this year, a system was inaugurated for checking up the occupancy of all buildings erected since 1916 for which Certificate of Occupancy had been issued for the purpose of ascertaining whether the building is now occupied in accordance with the Certificate of Occupancy. This is done by a corps of inspectors and, where they find any difference in the occupancy from that named in the Certificate, it is reported to this Division and an inspector is sent to investigate the circumstances and a violation filed.

It came to the attention of the Superintendent of Buildings during the year that a great many buildings were being unlawfully used as dance halls. Request was made to the Police Commissioner for a list of all such places and the list submitted by him contained 153 locations. On comparing this list with the records of this Bureau it was found that of this number sixty-two were approved dance halls and ninety-one were not. An immediate inspection was made of these places and violations filed against those buildings being occupied contrary to law.

All reports in connection with theatres, motion picture theatres and dance halls are filled in this Division in separate files for each particular place and all papers relative to such places are kept together.

During the year eight new theatres were opened to the public, one of which has a seating capacity of less than 300 and one has an open air roof garden having a seating capacity of 1,000. In addition to these, seven motion picture theatres were opened. These new theatres added 8,641 seats to the total number of seats existing in the city last year.

During the year one theatre was demolished having a seating capacity of 1,088; the old Madison Square Garden was also demolished which had a fixed seating capacity of 5,924. During the year the new Madison Square Garden was opened to the public and has a seating capacity of 17,288.

Forty-seven new dance halls were opened to the public during the year.

Following is a list of the number of places of public amusement in the Borough of Manhattan:

Theatres	197
Dance Halls	356
Motion Picture Theatres	126
Total Number of Seats in Theatres	288,314
Total Number of Seats in Motion Picture Theatres	63,315

During the year 2,560 Building Notices were filed and acted on by this Division. These are applications for slight alterations to buildings including also the erection of small sheds, motion picture booths, fences not used for advertising purposes, reviewing stands and small temporary structures.

During the year, to assist the Engineering Division, it was found necessary to have this Division examine plans and applications for small alterations that were filed.

A summary of this work follows.

	Jan.	Feb.	Mar.	Apr.	June	Oct.	Nov.	Dec.	Total
Plans received	38	57	99	69	56	104	116	88	627
Disapproved, first action	28	31	73	52	40	65	66	54	509
Approved, first action	15	16	18	30	27	30	37	50	223
Amendments, approved	45	45	51	66	62	40	57	62	428
Amendments, disapproved	17	18	22	31	21	9	10	60	188
Total number of actions	143	167	263	248	206	248	286	314	1,975

Approximate Estimated Cost:

Jan.	Feb.	Mar.	Apr.	June	Oct.	Nov.	Dec.	Total
$124,640	$72,600	$107,012	$83,230	$112,794	$109,530	$127,935	$166,640	$904,381

Following is a schedule of the various activities of this Division:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Exit orders filed	24	14	25	31	43	12	19	28	3	20	19	21	259
Violations filed	39	11	25	42	53	15	16	16	6	17	17	21	278
Unsafe orders filed	5	3	2	5	4	3	5	7	2	4	4	4	48
Letters, memos, etc., received	358	298	509	624	504	408	380	261	395	369	372	321	4,799
Letters written	409	252	368	420	452	447	331	232	424	458	287	364	4,444
Certificate of occupancy applications	168	128	125	140	157	143	125	135	150	191	158	155	1,775
Certificate of occupancy issued	150	98	118	108	114	82	88	86	125	157	132	191	1,449
Total number of certificates of occupancy issued since April 1, 1916													10,481
Total number of buildings' notices filed and acted on													2,560

Following is a list of inspections made by this division during the year 1925, classifying the inspections and indicating the total number of monthly as well as yearly inspections.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
F. D. order, non-factory	28	12	19	24	33	17	28	20	12	20	5	35	253
F. D. order (factory)	110	61	69	141	90	161	85	57	103	107	58	83	1,125
F. D. complaint	146	71	103	101	111	78	65	83	52	69	86	100	1,065
Certificate of occupancy	185	159	216	216	239	277	218	251	274	365	285	307	2,992
Dance hall	33	27	69	71	31	31	22	22	118	94	29	64	641
Theatre	7	6	45	139	70	12	10	7	8	16	19	12	351
M. P. theatre	3	10	60	29	56	62	25	8	6	4	4	6	273
M. P. exhibition	39	50	32	32	23	14	16	17	5	32	22	18	300
State Labor Department	...	...	...	...	1	...	1	...	...	...	...	...	2
Tenement House Department	2	...	1	...	3	...	1	5	...	1	1	1	15
Building notice	234	230	314	323	342	268	311	249	184	200	204	225	3,084
Violation	154	138	166	81	157	154	139	119	103	177	99	161	1,588
Unsafe building	30	22	38	15	18	26	27	13	19	24	27	19	280
Exit order	225	209	160	128	208	194	158	166	146	150	147	193	2,084
Memo. Eng. Div.	18	20	32	17	29	21	31	29	32	30	13	16	288
Complaint	16	22	20	28	53	18	21	6	18	16	13	30	261
Miscellaneous	94	79	110	130	107	83	135	112	56	101	82	130	1,219
Inspections re. alterations	95	88	95	81	62	26	105	24	39	50	46	58	769
Building zone complaints	11	...	5	1	10	3	2	12	17	7	17	8	93
Totals	1,430	1,204	1,554	1,554	1,643	1,445	1,420	1,200	1,193	1,463	1,161	1,416	16,683

The following is a schedule of the fires in the Borough of Manhattan during the year 1925:

Classes of Buildings	*Number of Deaths*
Dwellings and Furnished Room Houses	9
Factory lofts	2
Garages (Public)	2
Shanty (Watchman's)	2
Storehouse	1
Tenements	41
Total	57

Of the total number of fifty-seven deaths by fire, three occurred in buildings where the exit facilities are under the jurisdiction of the Superintendent of Buildings. Nine occurred in dwellings which under the law are not required to have any particular means of exit. These buildings have less than fifteen sleeping rooms. Forty-three occurred in tenement houses and factories and two occurred in watchmen's shanties on the street, these buildings being under the jurisdiction of other departments so far as exit facilities are concerned.

VIOLATION DIVISION

The Violation Division includes among its many duties, controlling action on all orders filed by the Bureau. Violations of every classification, including exit orders and unsafe building orders, are enforced by this Division, one of its most important functions being to obtain compliance with all orders filed.

Action to obtain compliance is based on the follow-up reports of the inspectors, and every effort is made to obtain prompt compliance with the orders filed.

In obtaining compliance with the orders filed, every effort is made to enforce the law involved without invoking the aid of the court by prosecuting.

Office hearings have greatly aided the Violation Division in this respect, many cases that otherwise would be prosecuted being complied with as a result of these hearings. Office hearings are not only effective in obtaining compliance, but they afford a means of personal contact between the Bureau and the public in connection with violations filed that otherwise, in most cases, would not exist.

During the year, there were 1,544 office hearings relative to violations of all classifications filed by the Bureau.

During 1925, twenty-eight more cases were taken to court for prosecution than during the preceding year. The increase was found to be in violations of the "no permit" and "contrary to permit" classifications, due, no doubt, to the larger amount of construction projected during 1925.

The disposition of those cases taken to court is shown in the following summary:

Disposition of Court Cases

Summonses pending December 31, 1924	29	
Summons issued	128	
Total for disposition	——	157
Fines—total amount $1,840; number of cases	27	
Summonses withdrawn	30	
Sentences suspended	56	
Cases held for trial in Special Sessions	1	
Summonses pending December 31, 1925	43	
Total	——	157

Classification of Violations in Which Summonses Were Issued in 1925

Contrary to permit	15	
Certificate of occupancy	19	
Defective construction	10	
Exit orders	23	
Frame structures	7	
No permit	25	
Miscellaneous	11	
Old elevator	1	
Plumbing contrary to rules	2	
Plumbing, no permit	3	
Zone resolution	12	
Total	——	128

Violations of laws, ordinances and rules under the jurisdiction of the superintendent of buildings were reported and disposed of as follows:

Pending January 1, 1925	1,243 (minus Zoning Cases)	
Reported	5,709	
Total	——	6,952
Dismissed		5,627
Pending January 1, 1926		1,325

Table XIII indicates the classification of the violations filed during 1925, and Table XIV the classification of cases pending January 1, 1926.

The three 1920 violations, the four 1921 violations and two of the 1922 violations, shown pending in Table XIV, cover electric signs erected on marquises. All these cases are pending in the Municipal Term Court, and have been adjourned from time to time pending action of the Board of Aldermen on a proposed amendment to the Sign Ordinance which, if adopted, will legalize these signs.

Three of the 1922 violations are against property in the hands of receivers appointed by court, and the two remaining 1922 violations have been pending in court for some time.

Of the fourteen 1923 violations, four are pending against electric signs, three have been held in abeyance pending action by the Board of Estimate and Apportionment on petitions to reclassify certain streets; three have been in court for some time; one is pending before the Board of Appeals and has not yet been heard, and one is a technical violation against a building under the control of the Board of Education, this violation now being in process of removal.

Prosecution of many of the 1924 pending violations has been commenced. Action on others has been stayed pending appeal and court action; a few are against electric signs, all cases of this classification being held in abeyance pending the decision of the Board of Aldermen on a proposed amendment to the Sign Ordinance, as stated before, and work is in progress on many others to comply with the orders.

The following is a summary of the personnel of the Violation Division:

1 Clerk in Charge.
1 Clerk in charge of the Unsafe Building Desk.
1 Law Clerk.
1 Statistician and follow-up clerk.
1 Dismissal Clerk.
1 Docket Clerk.

2 File Clerks.
2 Index Clerks.
1 Timekeeper—also in charge of special reports.
1 Assistant Engineer.
1 Construction Inspector.
7 Messengers.
1 Stenographer.

TABLE XIII

The Nature of Violations Filed Is Shown in the Following:

1925

No permit	1,147
Work contrary to permit	345
Defective construction	237
Sidewalk shed	57
Frame structure	29
Bearing capacity	47
Sign inside building line	22
Electric sign outside building line	48
Bulletin sign outside building line	8
Miscellaneous	468
Certificate of occupancy	351
Plumbing—no permit	557
Plumbing—contrary to permit	281
Plumbing—contrary to rules	517
Elevator—no permit	56
New elevator defective	15
Old elevator	1,524
Total	5,709

TABLE XIV

Violation Cases Pending January 1, 1926, Showing Classification and Years Filed

Classification	1920	1921	1922	1923	1924	1925	Totals
No permit					22	163	185
Work contrary to permit			1	2	19	95	117
Defective construction			3	4	9	48	64
Sidewalk shed						3	3
Frame structure					5	8	13
Bearing capacity						12	12
Sign inside building line						8	8
Electric sign outside building line	3	4	3	3	10	14	37
Bulletin sign			1		1	3	5
Miscellaneous					17	116	133
Certificate of occupancy				5	43	164	212
Plumbing—no permit					5	65	70
Plumbing—contrary to permit					5	45	50
Plumbing—contrary to rules					2	126	128
Elevator—no permit					4		4
New elevator—defective							
Old elevator					8	276	284
Totals	3	4	8	14	150	1,146	1,325

Prior to January 1, 1925, the classification C. O. (Certificate of Occupancy) included cases filed under classification Z. (Zoning).

TABLE XV

The Following Shows the Status of Pending Exit Orders

	1920	1921	1922	1923	1924	1925	Totals
Pending Jan. 1, 1925	1	0	12	152	138	.....	303
Filed 1925	.....	.....	.....	.....	.....	258	561
Dis. 1925	1	.....	3	22	111	147	284
Pending Jan. 1, 1926	.....	.....	9	130	27	111	277

The nine 1922 exit orders and 128 of the 1923 exit orders are pending against property under the jurisdiction of various city departments.

While efforts are being made by these departments to comply with the orders, they have been unable to complete work as yet owing to insufficient funds. Work progresses as funds are appropriated.

Of the two remaining 1923 exit orders, one is in court and the other is being dismissed.

INTERESTING COURT DECISIONS

In the case of People ex rel Drazan v. Moore, before Judge Cropsey, New York Law Journal, January 13, 1925, peremptory mandamus was denied to require reissuance of a revoked permit for the erection of a garage for more than five cars because original plans filed failed to show existence of a public school, the entrance to which is within two hundred feet from garage measured in a straight line diagonally across the street contrary to Section 20 of the Zone Resolution. The relator contended that measurement should not be in a straight line diagonally across the intersection, but by following the line of the sidewalk and crossing both streets at a right angle, which contention was not upheld.

In the case of the Washington Square Association et al v. Mann et al, before Judge Lydon, New York Law Journal, May 15, 1925, an application for peremptory mandamus to revoke a permit for the erection of a fifteen story tenement house, 149 feet 2 inches in height located at 32 Washington Square West, was denied. It was held the height of a tenement house facing a public park is to be determined by the application of both provisions of the Tenement House Law and of the Zoning Resolution.

Petitioners contended that under the provisions of the Tenement House Law, Section 51, the height of said building cannot exceed one and one-half times the width of West Washington Place, a sixty foot street; therefore building could not be erected to a height to exceed ninety feet, claiming that West Washington Place is the widest street upon which it is proposed to erect the building, 32 Washington Square West, as Washington Square West bordered on a park. Washington Square West, which borders on a park, is one hundred feet in width, and in a one and one-half times district on the Height District Maps accompanying the Zone Resolution, and the Building Zone Resolution provides that in a one and one-half times district no building shall be erected to a height in excess of one and one-half times the width of the street, and where a street borders a public place, public park or navigable body of water, the width of the street is the mean width of such street plus the width measured at right angles to the street line of such public place, public park or public water. Therefore this building could be erected to height of one hundred and fifty feet.

In the matter of Fontana before Judge Van Siclen, New York Law Journal, May 19, 1925, it was held the Board of Appeals is not estopped from revoking a certificate of occupancy which has been issued through fraud or misapprehension, otherwise permanent and perpetual violations of any and all important regulations would be given seal of approval. In this case this certificate of occupancy had been issued upon a false statement in plans and application that the plot of land was sixty feet wide, whereas in fact it was only forty feet wide.

In the matter of Multiplex Garages, Inc., res. v. Walsh et al, app. the Appellate Division, New York Law Journal, June 6th, 1925, reversed the decision of the Supreme Court, cited in the 1924 report of this Bureau. However, the Court of Appeals, New York Law Journal, October 28, 1925, reversed this decision of the Appellate Division, and reinstated the decision of the Supreme Court already referred to, and which appeared in the New York Law Journal on June 28th, 1924, which held that relative to the so-called "Garage Villages" that however desirable it might be to restrict as to number the erection, on a single lot, or on a parcel of land owned by a single person, of one car garages in a business district, the fact is that there is no such restriction, either in the ordinances or the statutes.

In the case of Rofrano v. McGrath et al, New York Law Journal, August 8th, 1925, before Mr. Justice Cropsey, it was held that while the law provides that the annual fee required to be paid by a licensed plumber shall be paid "during the month of January," that a plumber who was previously licensed and was prevented from making his annual payment for this license renewal during January by being ill at that time, and not engaged in following his trade, might make the required payment at a later time, and receive his license.

In the case of New York State Investing Co. v. Brady et al, New York Law Journal, October 8th, 1925, before Judge Glennon, the plaintiff, a taxpayer, seeks an injunction to restrain the owner and lessee from proceeding with the erection of a gasoline service station and to restrain the Fire Commissioner from issuing a permit for maintenance of a gasoline selling station and the Superintendent of Buildings be prevented from issuing a certificate of occupancy. Injunction was denied.

Held as plans had been approved in the Fire Department upon the strength of which definite obligations were incurred and expenditures made, namely, entering into contracts and lease, a vested right had been acquired which could not be voided by a subsequent amendment to the Building Zone Resolution prohibiting the erection of gasoline filling stations in a business district. The Appellate Division, First Department, New York Law Journal, December 16th, 1925, affirmed the above decision.

In the matter of Edbro Realty Co., Inc., and 143 West 36th St., Inc., for a peremptory mandamus to revoke a permit for the erection of a building at 135-139 West 36th Street—denied by Judge Lydon, Supreme Court, Special Term on June 8th, 1925. Held that a permit cannot be revoked merely because some outsider raises a question of title to property providing affidavits on record with application for permit show ownership to such property.

STENOGRAPHIC DIVISION

A supervising stenographer in charge. Ten stenographers and typewriters assigned to this division.

In general the duties performed by this division include the writing of letters by the stenographers, the data for which is derived from reports made by the inspectors; and the ordinary routine of form correspondence. Transcripts are copied daily from plans for new buildings, alterations to buildings, elevators, plumbing, signs, etc., which the law requires to be filed in this bureau; and the objections raised by the plan examiners to the proposed work are forwarded to this division to be typed. A list of the registered plumbers in the Borough of Manhattan, consisting of some 1,500 to 1,600 names, with shop and residence addresses and register numbers are also typed:

During the year there were also typed to be in shape for service, the following:

Original letters based on reports of inspectors	5,580
Violation, Exit and Unsafe Building Notices	7,620
Form letters	30,480
Final plumbing certificates	38,000
Office subpoenas	4,632
Requests for sign inspections	2,250

The civil lists, the annual budget of the Bureau and its semi-monthly payrolls, open market orders, and all kinds of statistics having any relation to this Bureau are typewritten in tabulated form.

On request the stenographers of this division are from time to time assigned temporarily to the various heads of the Bureau.

SIGNS

Under the provisions of Chapter 23, Code of Ordinances, the Bureau of Buildings issues permits for signs, inspects their construction, certifies to the City Clerk as to compliance with provisions of law, and collects the fees which are transmitted monthly to the City Chamberlain. The Bureau keeps a record of all these signs and they are identified by a register number which must be attached in all cases to the sign, together with the name of the owner.

The signs here referred to are such as are within the property line. Signs outside of the building line come under the jurisdiction of the City Clerk, except that the approval of the construction of the sign must be obtained from the superintendent of buildings before the city clerk will issue a license for it.

Three types of signs are recognized: (a) The ground sign which is of any type of construction built on the ground inside the building line; (b) the closed roof sign, which is a flat surface sign erected on the roof of a building, and (c) the open roof sign, which is a sign with an open frame work having no continuous flat surface.

These signs are so grouped whether electrically lighted or otherwise.

For the ordinary ground sign there is a charge of $2 for each permit issued. For a closed roof sign the charge is $5, and for an open roof sign, $10.

Following is the summary of signs approved by the Superintendent of Buildings during 1925, and the amount of the charges:

Ground signs	34	Fees	$68
Closed roof signs	20	Fees	100
Open roof signs	9	Fees	90
Totals	63		$258

ILLUMINATED SIGNS

The term "illuminated sign" as used here is restricted to signs outside the building line. Different provisions are made in the Code of Ordinance for these signs than for similar signs inside the building line. The type of sign here referred to when placed within the building line generally on the roof, is classified as an open sign.

For this class of sign (outside the building line) permits must be secured consisting of a license issued by the City Clerk, after approval of construction and mode of suspension by the Bureau of Buildings, and of electrical equipment by the Department of Water Supply, Gas and Electricity. The fees in these cases are paid annually and are fixed in accordance with the display area of the sign. These areas are figured by the Bureau of Buildings and reported to the City Clerk. The fee charged is fixed by the ordinance at ten cents per square foot.

During 1925, 3,815 applications for such signs were filed in the Bureau of Buildings, compared with 4,336 applications in 1924.

CHANGES IN BUILDING ZONE RESOLUTION

Two changes in the Building Zone Resolution were made by the Board of Estimate and Apportionment in 1925 as follows:

Including in the uses prohibited in a business district, by paragraph (a) of section 4:

(46) Gasoline Service Stations.

Amending Section 21 of the Zoning Resolution as follows:

No gasoline service station may be erected or extended on any portion of a street between two intersecting streets in which portion there exists an exit from or an entrance to a public school; and in no case within a distance of 200 feet from the nearest exit from or entrance to a public school. This protection shall also apply to duly organized schools for children under 16 years of age, giving regular instruction at least five days a week for eight months or more each year owned and operated by an established religious body or educational corporation.

CHANGES IN BUILDING ZONE MAPS

Thirteen changes in the Building Zone maps, relating to the Borough of Manhattan, were made by the Board of Estimate and Apportionment in 1925 as follows:

Changing from a residence to a business district, the property abutting upon 5th Avenue, from 129th Street to 131st Street.

Changing from a one and one-half times, to a two times height district, the property abutting upon the westerly side of 8th Avenue, from West 38th Street to West 39th Street.

To show as a residence, instead of an unrestricted district, the area bounded by a line midway between West 203rd Street and West 204th Street, a line 100 feet east of 10th Avenue, a line midway between West 206th and West 207th Streets, and a line 100 feet west of 9th Avenue; also the area bounded by a line midway between West 207th Street and West 208th Street, a line 100 feet east of 10th Avenue, a line midway between West 214th Street and West 215th Street, and a line 100 feet west of 9th Avenue; and so as to show as an unrestricted instead of a business district, the property at both westerly corners of West 215th Street and 9th Avenue.

To show as a residence, instead of an unrestricted district, the property abutting upon Oliver Street, from a line 100 feet southeast of New Bowery, to a line 100 feet north of Madison Street; and also the property abutting upon the northerly side of Henry Street, from a line 100 feet southeast of New Bowery, to a line 100 feet west of Catherine Street, and on the southerly side of Henry Street from Oliver Street, to a line 100 feet easterly therefrom.

Changing from a one and one-half, to a two times height district, the property abutting upon the westerly side of 8th Avenue, from West 35th Street to West 36th Street.

Changing from a residence to a business district, the property abutting upon West 187th Street, from Northern Avenue, to a line 100 feet east of Fort Washington Avenue.

Changing from a residence to a business district, the property abutting upon the easterly side of St. Nicholas Avenue, to a depth of 100 feet, from West 127th Street to West 130th Street.

Changing from a residence to an unrestricted district, the property abutting upon the westerly side of Edgecombe Avenue from a line 100 feet northeast of West 167th Street northwardly and westwardly to the unrestricted district relating to Jumel Place.

Changing from a business to a residence district the property abutting upon East 52nd Street to a depth of 100 feet from a line 100 feet west of 2nd Avenue to a line 100 feet east of 3rd Avenue.

Changing from a residence to a business district the property abutting upon West 72nd Street from a line 100 feet west of Broadway to West End Avenue.

Changing from an unrestricted to a business district, the property on the southwesterly corner of Wooster and West Fourth Streets to a depth of 100 feet upon each of the said streets; the property on the easterly side of Washington Square East to a depth of 100 feet from West 4th Street to Waverly Place, and the property in the middle of the block between University Place and Greene Street from Waverly Place to West 6th Street, where not heretofore established as a business district from University Place to a line 100 feet easterly therefrom.

Changing from a residence to a business district the property abutting upon West 131st Street to a depth of 100 feet from a line 100 feet west of 5th Avenue to a line 100 feet east of Lenox Avenue.

Changing from a residence to a business district the property abutting upon all four corners of East 58th Street and Park Avenue, to a depth of 100 feet.

OCCUPANCY SURVEY

As outlined in the report for the Year 1924, relative to the block survey which had been made and completed the previous year, a re-survey of these records was started in the early part of 1925 and is now completed.

This re-survey comprises a virtual reinspection of the conditions that existed when the original survey was made. Any changes in the occupancy as indicated in the original inspection have been noted on the records of the first reinspection. Where a change of occupancy has occurred a special report was made and where necessary a proper violation filed.

This second survey has served to keep the departmental records practically up to date and has served a second purpose, i. e., to enable the record clerk to accurately check the occupancy as stated in alteration applications filed in this Bureau.

These block survey records have been used to great advantage in expediting the checking up of occupancies specified in all applications filed for alterations, including plumbing, and have eliminated the necessity for preliminary inspections.

The old system of making an inspection before the examination of these applications has been done away with. This is due to the fact that the record clerk has this information at first hand and checks it before the plans are forwarded to the examiner. This system has also resulted in the discovery of many discrepancies between statements made as to occupancy and the records of the department.

In making this re-survey the inspectors were instructed when this work was started to note particularly the exit facilities of all buildings, including factories, public buildings and residences. In their inspection of residence buildings, particular attention was given furnished room houses to determine the number of sleeping rooms, a special report being made where more than fifteen were found. This phase of the reinspection has resulted in the filing of a large number of special reports on exits, these reports being forwarded to the Public Safety Division for the filing of appropriate orders.

Another object of this reinspection was to determine whether cooking was being done in residence buildings by more than two families. This resulted in the discovery of many of such buildings being unlawfully used as tenement houses. Reports of these conditions have, throughout the year, been forwarded to the Tenement House Department for disposition.

Reinspections are also being made to determine whether an actual occupancy is the same

PLATE IX—INSPECTION DIVISION SHOWING OLD WOOD FURNITURE

as the occupancy specified in certificates of occupancy issued for all new buildings. These occupancy certificates date from the year 1915 and the checking up has been started from then. The reinspection in this respect involves all new buildings with the exception of tenement houses, theatres and 100 per cent. factory buildings. It comprises a thorough inspection of buildings. Where an occupancy has been changed and does not conform to the existing certificate of occupancy, a report of this condition is made on a special form and forwarded to the Public Safety Division for disposition.

Particular attention has been given apartment hotels, non-housekeeping apartments and similar buildings to determine whether any cooking is being done. Where such is found to be the case proper action has been taken. Inspections of private schools, nurseries, private hospitals, etcetera, have been made to ascertain if the law is being complied with in regard to the twenty and forty foot height limit in buildings of the non-fireproof type.

Inspectors while making this re-survey and the certificate of occupancy inspections, have been instructed to give particular attention to violations of the Building Zone Resolution, complaints in regard to which are in all instances promptly investigated, violations being immediately filed where an illegal occupancy is found to exist.

This system forms a complete check-up record of this important phase of the Bureau's activities. It constitutes a complete and permanent record, the information recorded being increasingly valuable as an aid to enforcing the Zoning Ordinance.

IMPROVEMENTS IN OFFICE EQUIPMENT

The Secretary reports that with money appropriated by the Board of Estimate and Apportionment, enough steel desks were purchased to complete the equipment of the inspection room, a much needed improvement. Plate No. 9 shows the inspection room before, and Plate No. 10 the same room after the installation of the metal desks.

PLATE X—INSPECTION DIVISION SHOWING NEW STEEL FURNITURE

BULLETIN No. 1—1925

NEW MATERIALS OF CONSTRUCTION

U. S. Gypsum Company's Sheetrock Pyrofill floor and roof construction.

The following type of construction is hereby approved for use in the Borough of Manhattan, for

1. Floors and roofs of non-fireproof buildings, minimum thickness of slab 2½ ins.

2. Special Roof Construction for *fireproof* buildings in accordance with section 354-6 of the Building Code, thickness not less than 2 ins., resting on steel shapes spaced not more than 1 ft. for each inch of thickness.

3. Roofs of fireproof buildings having a clear height of at least 20 ft. from the lower chords of supporting trusses to the floor below in accordance with section 351, 5, b, of the Building Code. Minimum thickness of slab 4 inches.

Sheetrock Pyrofill Construction consisting of Sheetrock ⅜-inch thick and 32 inches wide, resting on the flanges of steel rails or other suitable members 32.5 inches centre to centre, covered with "Pyrofill," consisting of a uniform mix of calcined gypsum and water with 12 lbs. of wood shavings to every 100 lbs. of calcined gypsum, to a total thickness of at least 2½ inches, and reinforced with continuous wire mesh 0.118 inch diameter 4 inches on centres longitudinally and 0.107 inch diameter, 8 inches on centres transversely, resting on the heads of rails and ⅝-inch above the sheetrock at mid-spans; maximum uniform superimposed load 85 lbs. per square foot.
Dated: March 10, 1925.

BULLETIN No. 2—1925

NEW MATERIALS OF CONSTRUCTION

DRINKING FOUNTAIN

The Halsey Taylor No. 604 vitreous china drinking fountain, made by the Halsey W. Taylor Company of Warren, Ohio, and 210 East 45th Street, New York City, and consisting of a shallow bowl mounted with a half S brass 1½ inch trap with cleanout cap and brass water supply connections and valves regulating height of water spout and shut-off, is hereby approved for use in the Borough of Manhattan.

Dated: March 24, 1925.

BULLETIN No. 3—1925

NEW MATERIALS OF CONSTRUCTION

GUSTAV EY HOLLOW CONCRETE BLOCKS

The concrete hollow building blocks manufactured by Gustav Ey of North Fourth Street, Woodside, Long Island, N. Y., have been tested and are approved for use in the Borough of Manhattan, where permitted under section 236 and section 254 of the Building Code, in hollow building block masonry.

The blocks are shaped like a heavy I beam section, and are brand-marked "Q.F.A.N."

Dated: May 1, 1925

BULLETIN No. 4—1925

NEW MATERIALS OF CONSTRUCTION

STRAUB CINDER CONCRETE BLOCKS

The cinder hollow, semi-solid, and back-up blocks manufactured by the Cinder Tile Company of 250 Park Avenue, New York City, under the F. B. Straub patent and specifications, have been tested and are approved for use in hollow building block masonry in the Borough of Manhattan, where permitted by the Building Code.

The blocks are made of cement and cinders, or cement, sand and cinders, 8 x 8 x 16 inches with two cells, and 12 x 8 x 16 inches with three cells, the cells being oval in shape. The brand mark consists of the name Straub on each block.

Dated: May 12, 1925

BULLETIN No. 5—1925

NEW MATERIALS OF CONSTRUCTION

"STONETILE" Cinder and Stone
HOLLOW CONCRETE BLOCKS

The cinder and stone concrete hollow blocks manufactured by the Cinder Tile Company, 250 Park Avenue, New York City, under the National Stonetile Company's patent and specifications, have been tested and are approved for use in hollow building block masonry in the Borough of Manhattan, where permitted by the Building Code.

The blocks are made of cement, sand and stone, or of cement and cinders, 8 x 12 x 3½ inches, and 6 x 12 x 3½ inches, with two rectangular cells. Each block has a mark of identification consisting of an impressed groove on the shells and web running continuously the length of the block.

Dated: May 12, 1925.

BULLETIN No. 6—1925
NEW MATERIALS OF CONSTRUCTION

REPUBLIC SLAGBLOK

Fireproof Floor Construction

The following construction as manufactured and controlled by the Republic Fireproofing Company, Inc., 31 Union Square, New York City, has been added to the list of approved fireproof floor construction in accordance with Section 354, 5, b, of the Building Code:

Republic Slagblok placed in pairs with open ends together in temporary forms laid in alignment to form continuous ribs in two directions in which steel reinforcement is placed and then concrete of 1-2-4 mix is poured, the slabs being supported on suitable structural members.

The design is based on standard methods of stress calculations with moment equations of:

$$M = \frac{wL^2}{12}$$ for panels simply supported on four sides.

$$M = \frac{wL^2}{15}$$ for panels partly continuous.

$$M = \frac{wL^2}{18}$$ for panels fully continuous.

Dated: June 30, 1925.

BULLETIN No. 7—1925
NEW MATERIALS OF CONSTRUCTION

NATIONAL STEEL FABRIC STYLE P 214

Hollow Partitions

The following type of partition constructed with a plaster base of National Steel Fabric, Style P 214, manufactured by National Steel Fabric Company, Pittsburgh, Pa., and 525 West 33d Street, New York City, has been approved as a fire retarding partition for use in the Borough of Manhattan, where permitted by the Building Code, to wit:

2 inch by 4 inch wood studs, 16 inches on centers, with 2 inch by 4 inch sills and capping covered both sides with National Steel Fabric, Style P 214, consisting of No. 14 gauge galvanized wires, 2 inch mesh welded, and backed by "white craft" Mosinee paper fastened to the wire mesh by No. 16 gauge wire lacing, 4 inch on centers, the steel fabric being fastened to studs sill and cap at 6 to 8 inch intervals with special oval offset head nails 1¼ inch long and plastered with at least two coats of hard gypsum mortar to a minimum thickness of ¾ inch on each side of the partition.

Dated: July 8, 1925.

BULLETIN No. 8—1925
NEW MATERIALS OF CONSTRUCTION

LALLY COLUMN CONSTRUCTION

As a result of the tests conducted at Columbia University Testing Laboratory on April 15, 1925, approval is hereby granted for general use in the Borough of Manhattan, of the

corner column connections, long and short brackets and plate beam connections shown on blue print dated May 9, 1925, prepared by George E. Strehan, Consulting Engineer, describing tests Nos. 1 and 7, inclusive.

Approval is also hereby granted for general use in multi-story construction of Lally columns with connection details as shown on blue print dated March 25, 1925, prepared by George E. Strehan, Consulting Engineer, excepting for structures in which provisions must be made to resist wind pressure.

The design and construction of all columns must conform in every respect with the conditions embodied in Bulletin of approval No. 12-1923.

Dated: July 30, 1925.

BULLETIN No. 9—1925

NEW MATERIALS OF CONSTRUCTION

U. S. Gypsum Company's Sheetrock Pyrofill
FLOOR AND ROOF CONSTRUCTION

The following type of construction is hereby approved for use in the Borough of Manhattan, for

1. Floors and roofs of non-fireproof buildings, minimum thickness of slab 2½ inches.
2. Special Roof Construction for *fireproof* buildings in accordance with Section 354,6 of the Building Code, thickness not less than 2 inches, resting on steel shapes spaced not more than 1 foot for each inch of thickness.
3. Roofs of fireproof buildings having a clear height of at least 20 feet from the lower chords of supporting trusses to the floor below in accordance with section 351, 5, b, of the Building Code. Minimum thickness of slab 4 inches.

Sheetrock Pyrofill Construction consists of Sheetrock ⅜ inch thick and 32 inches wide, resting on the flanges of steel rails or other suitable members 32½ inches centre to centre, covered with "Pyrofill" consisting of a uniform mixture of calcined gypsum (Structolite), sand and clean steam cinders, in the proportion of 1½ parts Structolite, one part clean sand and 3 parts of cinders, with sufficient water to produce medium consistency, poured to the specified thickness, with reinforcement consisting of continuous National Steel wire fabric No. 11 and No. 12 wire, 4 inch and 18 inch mesh, as installed in the test slabs.

Dated: July 30, 1925.

BULLETIN No. 10—1925

NEW MATERIALS OF CONSTRUCTION

SAMSON WALL

Approval is hereby granted for general use in the Borough of Manhattan, of the form of construction called the "Samson Wall," devised by Albert Oliver & Son, Inc., and constructed under their supervision, for the exterior walls of buildings which are permitted to be of frame construction.

Samson wall construction consists of 4½ inches of cement mortar deposited on Samson sheathing by the use of the Oliver mortar gun, embedding in the mortar an electrically welded mesh of ⅜ inch vertical rods spaced 8 inches centre to centre, and horizontal rods of the same diameter, spaced 24 inches centre to centre. The cement mortar is mixed in the proportions of one part Portland cement, three parts sand and one-tenth part hydrated lime, with sufficient water to produce a workable mixture. The Samson partition material consists of two thicknesses of double Neptune hair insulator with 1 inch poultry netting on each

side. An electrically welded fabric having No. 8 vertical wires, 4 inches centre to centre, and No. 10 horizontal wires 16 inches centre to centre, is applied to one side of the partition material and suitably tied to ¼ inch vertical rods spaced 8 inches centre to centre on the other side. The ⅜ inch reinforcement is located one inch from the finished outside surface of the wall (3½ inches from the Samson partition material).

This approval is conditioned on the maintenance of the standards of material and workmanship established by tests made at Nos. 711-717 East 140th Street, New York City, on June 10, 1925.

Dated: July 31, 1925.

BULLETIN No. 11—1925
NEW MATERIALS OF CONSTRUCTION

PORTLAND CEMENT

The following quick setting cement has been added to the list of approved Portland cements complying with section 26 of the Building Code:

VAN DEN HEUVEL SUPERCEMENT, ANTWERP, BELGIUM, marked:
J.V.D.H.
CIMENT PORTLAND ARTIFICIEL
D'ANVERS

Agent, Aug. F. Goris, 103 Park Avenue, New York, N. Y.

Dated: August 25, 1925.

BULLETIN No. 16—1925
NEW MATERIALS OF CONSTRUCTION

PORTLAND CEMENT

The following quick setting cement has been added to the list of approved Portland cements complying with section 26 of the Building Code:

ATLAS LUMNITE CEMENT

Manufacturer, The Atlas Lumnite Cement Co., 25 Broadway, New York, N. Y.

Dated: September 23, 1925

BULLETIN No. 12—1925
MODIFICATION SECTION 532, BUILDING CODE

Application 575 New Buildings 1924. Premises 809-829 Eighth Avenue, 301-333 West 49th Street, 809-825 Eighth Avenue.

In the construction of a large auditorium in which there is no stage, but in which the performances are to be given in an open arena, it is proposed to construct the main balcony, and what is designated as the small balcony, with platforms or stepping for the seats having a width of 32 inches, and a height of 24½ inches and 23 inches, respectively, with a permanent railing between each row of seats thus arranged. A strict interpretation of the building code would require that the steppings have a width of 32 inches, and a rise of 21 inches.

A modification of section 532 of the Building Code is requested and hereby granted, to permit the construction of the steppings with the greater rises, for the reason that a practical difficulty is involved in that if constructed in strict conformity with the requirements, the slope of the balconies would be so flat that the sight lines from the rear seats would be obstructed and would prohibit the use of these parts of the building. The provision of the hand rails will provide adequate safeguards for the occupants of these seats.

Dated: May 28, 1925.

BULLETIN No. 13—1925

MODIFICATION SECTION 152, BUILDING CODE

Application 82 New Buildings 1925, Premises 1721-1738 Park Avenue, northeast corner 120th Street.

In the erection of a three-story public garage on a corner lot having a frontage of 50 ft. 5½ ins. on the avenue and 90 ft. on the street, it is proposed to provide as the required means of egress a stairway at the westerly end of the building extending from the street level to the roof, constructed of incombustible materials and enclosed in fireproof partitions, and a 45 degree fire escape at the easterly end of the building connecting directly with the street. The building is to be three stories or about 40 feet high, and is to be of fireproof construction throughout. The number of occupants on each floor is to be limited to four. A strict application of the code would require two interior stairs.

A modification of section 152 of the Building Code is requested and hereby granted, to omit the construction of one interior stairway, and construct a 45 degree fire escape as a required means of egress, inasmuch as the building is to be fireproof throughout, whereas under the provisions of the code it might be constructed non-fireproof, and for the further reason that the stairway is of fireproof construction throughout whereas it might be of wood with a fire retarding enclosure, that the number of occupants to be provided for is small, and that the construction of the additional stairway would involve a practical difficulty, involving loss of space without compensating advantages.

Dated: August 25, 1925.

BULLETIN No. 14—1925

MODIFICATION SECTION 356, BUILDING CODE

Application 1859 Alterations 1925, Premises 47-65 West 42d Street, 736-744 Sixth Avenue.

In altering an existing fireproof office building eight stories or about 102 feet high by increasing its height to fifteen stories or about 150 feet high, it is proposed to retain the existing non-fireproof trim and flooring below the seventh floor.

The trim and flooring throughout the added stories is to be made of incombustible materials, thus securing a better condition than would result if the building were limited to a height of 150 feet which would permit the use of non-fireproof trim and flooring. A strict application of the Building Code would require the use of incombustible trim throughout.

A modification of Section 356 of the Building Code is requested and hereby granted, to permit the alteration as proposed without replacing the trim and flooring of the existing building below the seventh floor, inasmuch as the height of the building as altered will not greatly exceed 150 feet, and the use of incombustible trim throughout the new portion will secure a better condition than would be obtained if the building were to be limited to a height of 150 feet and the trim throughout consisted of non-fireproof material as permitted by the code.

Dated: September 8, 1925.

BUILDING No. 15—1925

MODIFICATION SECTION 152, BUILDING CODE

Application 435 New Buildings 1925, Premises 1 East 54th Street, 689-691 Fifth Avenue, northeast corner.

In the construction of a fourteen-story building about 196 feet high, to be used for

offices and show rooms, and having for exits one interior stairway and one fire tower, it is proposed to extend the interior stairway from the ground to the second machine room floor above the 14th floor, and a fire tower from the ground to the 13th floor. The area of the building above the 13th floor is so reduced by the requirements of the Building Zone Resolution as to require only one stairway, and the space above this floor is used for tanks, elevator machinery, ventilating apparatus, and for board rooms and executive offices which have only occasional occupancy. A strict interpretation of the Code would require that the fire tower be extended to the full height of the building.

A modification of section 152 of the Building Code is requested and hereby granted to permit the construction of the building as proposed for the reason that the area of the building above the 13th floor is such that only one stairway is required, that the number of persons to be accommodated above this floor is less than the capacity of the stairway provided, and that there is a practical difficulty involved inasmuch as the extension of the fire tower would result in the loss of space without compensating advantages.

Dated: September 10, 1925.

BULLETIN No. 17—1925

NEW MATERIALS OF CONSTRUCTION

CONCRETE BRICK,
SEABOARD CONCRETE PRODUCTS CORPORATION:

The concrete brick manufactured by the Seaboard Concrete Products Corporation of Great Neck, N. Y., have been tested and are approved for use in place of ordinary brick in the Borough of Manhattan.

Each brick is 2.3 x 3.6 x 8 inches in size, and bears the mark of identification consisting of an equilateral triangle impressed on one end.

Dated: October 19, 1925.

BULLETIN No. 18—1925

NEW MATERIALS OF CONSTRUCTION

SAND LIME BRICK,
BUILDING MATERIALS CORPORATION:

The Sand Lime Brick manufactured by the Building Materials Corporation, of 300 Madison Avenue, New York, N. Y., at Metuchen, near New Brunswick, N. J., have been tested and are approved for use in all forms of brick masonry in the Borough of Manhattan.

Each brick is to bear a mark of identification consisting of the letter M impressed at each end of one bed face of the brick.

Dated: October 21, 1925.

BULLETIN No. 19—1925

NEW MATERIALS OF CONSTRUCTION

ZENITHERM:

The material designated as "S-75 ZENITHERM," manufactured by the Zenitherm Company, Inc., 390 Frelinghuysen Avenue, Newark, N. J., has been tested and approved for use in the Borough of Manhattan.

For the floors and sides of toilet rooms, and water closet compartments in buildings constructed under the provisions of the Building Code;

For interior trim in fireproof buildings more than 150 feet high, under the provisions of section 356 of the Building Code;

In non-fireproof stair enclosures, under the provisions of section 153 of the Building Code; and

For fire retarding construction, equivalent to ½-inch plaster boards finished with ½-inch mortar where such construction is required by the Building Code.

Dated: December 2, 1925.

BULLETIN No. 21—1925

NEW MATERIALS OF CONSTRUCTION

CEMENT APPROVED:

The following cement has been added to the list of cements which meet the requirements of section 26 of the Building Code for Portland cement:

MAGNOLIA CEMENT

manufactured by the Southern Cement Company, Birmingham, Alabama.

Dated: December 28, 1925.

BULLETIN No. 20—1925

Modifications have been issued similar to those reported in previous bulletins as indicated below:

BULLETIN No. 23, 1920

Application 160, Alterations, 1925. Premises, 162 East 33d Street.
Application 777, Alterations, 1925. Premises, 96 Christopher Street.
Application 2109, Alterations, 1925. Premises, 55 First Avenue.

BULLETIN No. 13, 1917

Application 2276, Alterations, 1924. Premises, 61 East 66th Street.

BULLETIN No. 13, 1925

Application 673, New Buildings, 1925. Premises, 521-523 West 47th Street.

Dated: December 21, 1925.